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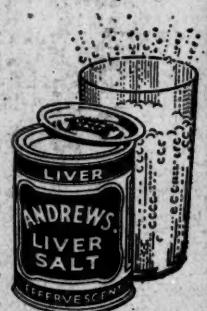

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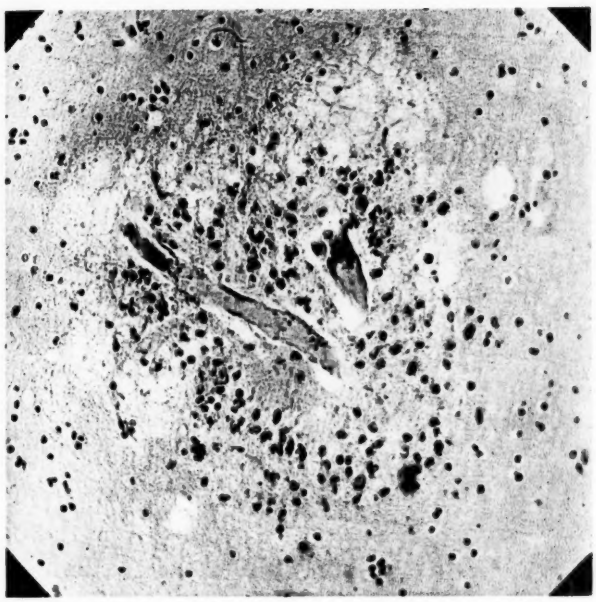

FIG. 1.—Photomicrograph, by Wellcome Research Institute, of brain tissue; cerebral vessel showing engorgement, oedema, and perivascular infiltration. (× 175.)

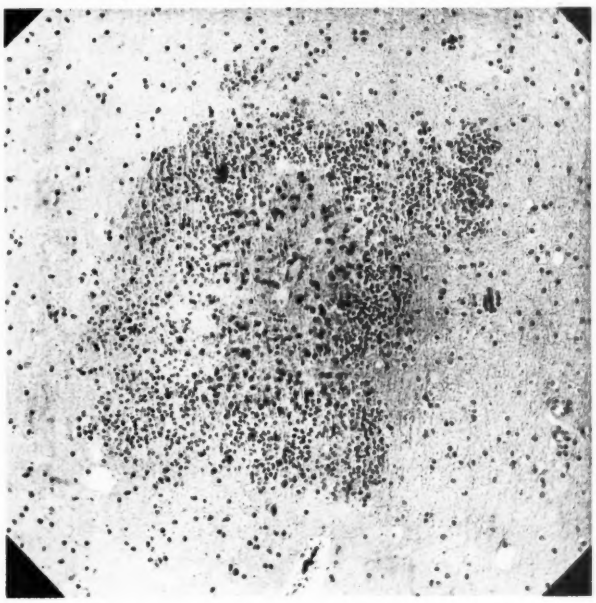

FIG. 2.—Photomicrograph, by Wellcome Research Institute, of brain tissue; showing focal area of increased cellularity. (× 100.)

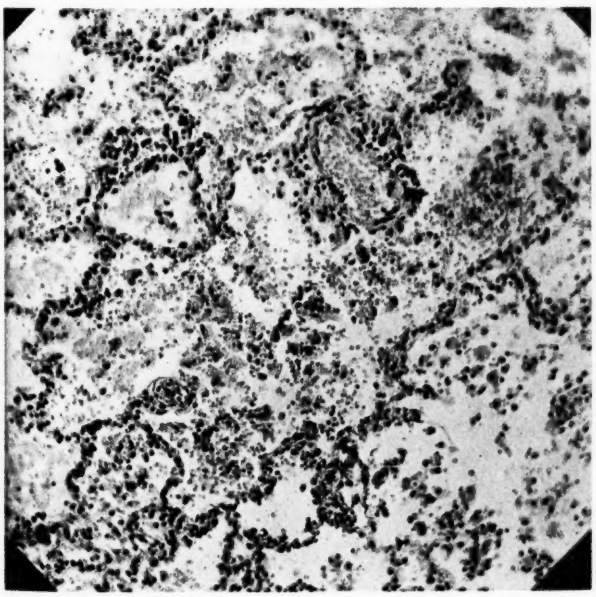

FIG. 3.—Photomicrograph, by Wellcome Research Institute, of bronchiole; showing scanty exudate. Note infiltration of bronchiolar walls. (× 100.)

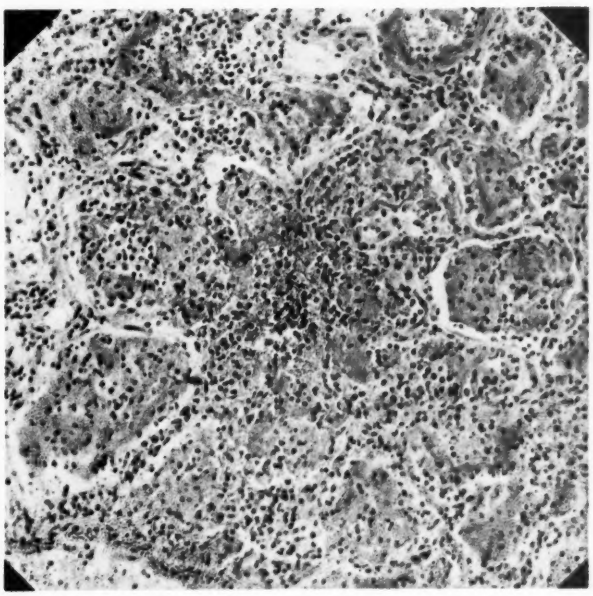

FIG. 4.—Photomicrograph, by Wellcome Research Institute, of lung; showing area of heavy exudate, fibrin, mononuclear cells of macrophage type, and stripping of alveolar epithelium. (× 100.)

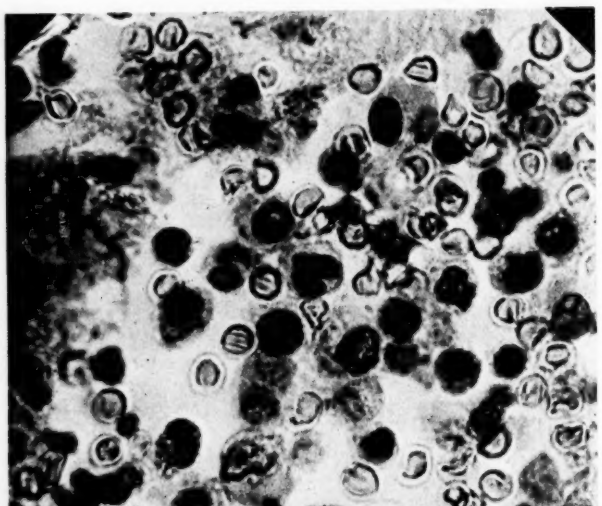

FIG. 5.—Photomicrograph, by Wellcome Research Institute, of exudate from lung; showing predominance of mononuclear cells, with red blood corpuscles, occasional polynuclears, and fibrin. (× 1000.)

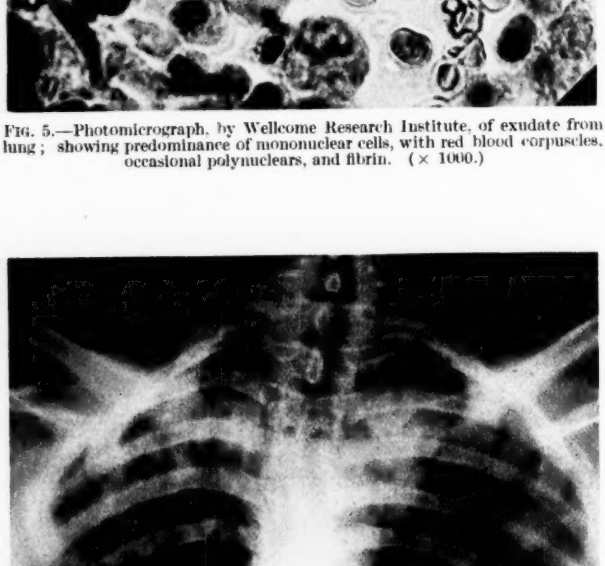

FIG. 6.—Radiograph of chest taken on February 8, 1943; showing a large area of consolidation in right lower lung field; both lung fields filled with numerous soft shadows.

BRITISH MEDICAL JOURNAL

LONDON SATURDAY JULY 17 1943

A FATAL CASE OF ATYPICAL PNEUMONIA WITH ENCEPHALITIS

BY

HECTOR PERRONE, M.D.
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AND

MYRON WRIGHT, M.D.
Captain, U.S.A.M.C.

[WITH PHOTOGRAVURE PLATE]

Recent investigation (Kneeland and Smetana, 1940; Longcope, 1940; Blake *et al.*, 1942; Reimann *et al.*, 1942) indicates that the term "atypical primary pneumonia" embraces a clinical group of closely related infectious diseases, in certain cases of which viruses have been definitely established as the aetiological agents. In other instances where no virus has yet been isolated the pathological and clinical evidence suggests a virus infection. Such viruses hitherto isolated appear to be antigenically related to, although not identical with, the viruses of psittacosis, lymphocytic choriomeningitis, and lymphogranuloma venereum, all of which can produce meningitis as well as pneumonia in man or animal. Moreover, Smadel and his co-workers (1942) report two cases of lymphocytic choriomeningitis, in both of which extensive pneumonitis was found at necropsy. The lungs closely resembled those described in the few available pathological descriptions of atypical pneumonia.

Scadding (1937) reported a case of encephalitis and "disseminated focal pneumonia" (atypical pneumonia) in a patient previously treated in hospital for atypical pneumonia. The presenting syndrome was that of laryngeal paralysis. At necropsy the medulla, pons, and midbrain contained small areas of softening and haemorrhage; microscopically, perivascular "cuffing" and focal degeneration of nerve cells were prominent. In two other adult cases in which the brain was examined (Longcope, 1940) no evidence of encephalitis was found. In nine necropsies on infants with "primary virus pneumonitis" (Adams, 1941) no clinical or pathological evidence of encephalitis was discovered.

Reimann (1938) reported a case of atypical pneumonia in which positive Kernig and Babinski reflexes and ankle clonus could be elicited. The patient was comatose at intervals, the pupils sluggish and dilated; strabismus was noted and the neck was slightly rigid. Spinal fluid pressure was 220 mm.; the cell count varied beween 220 and 350, with 78 to 91% polymorphonuclear cells; total protein was 74 mg. per 100 c.cm. Attempts to isolate a virus from the spinal fluid were unsuccessful. Complete recovery took place.

Hein (1943) reported two cases of atypical pneumonia showing clinical and laboratory evidence of meningo-encephalitis. One was that of a 23-year-old soldier who developed photophobia, stiff neck, and a positive Kernig sign on the fifth day of his illness. Cerebrospinal fluid contained 380 cells (77% polymorphs, 23% lymphocytes); Pandy's reaction was positive, sugar content raised, chlorides low; cultures were sterile. Temperature eventually fell to normal and the chest became clear, but the cerebrospinal fluid continued to have a high lymphocyte count for some time. Eventual recovery was complete. The second case was that of a 34-year-old soldier with a maculo-papular rash who on the fourth day in hospital complained of headache, became confused, and developed a stiff neck. Cerebrospinal fluid contained 26 cells, all lymphocytes; Pandy's reaction was positive, sugar and chlorides normal. In this case, also, clinical improvement preceded clearing of the cerebrospinal fluid.

Case Report

Corporal A., aged 20, was admitted to an American Army hospital in England on Feb. 1, 1943. His illness had begun the previous day with cough, soreness in the throat on coughing, fever, nasal obstruction, moderate headache, and some aching pains in the chest and arms. Except for frequent attacks of tonsillitis during the previous year his past history was negative. The family history was also non-contributory.

On admission his temperature was 101.2°, pulse 95, and respirations 20. He appeared moderately prostrated; face and neck were flushed; eyes watery and injected. The right naris was partially obstructed, and a scant nasal discharge was present. The pharynx and posterior half of the palate were diffusely reddened; tonsils were moderately enlarged. The neck was not stiff. Lungs were clear and the rest of the examination was essentially negative.

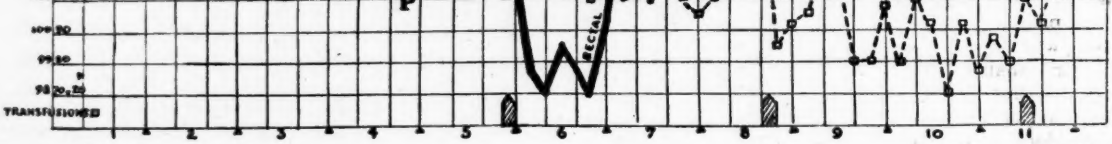
Laboratory findings were as follows: Urine: Negative except for trace of albumin in terminal specimen. Blood count: Feb. 2, Hb 90%, R.B.C. 4,250,000, W.B.C. 5,700—79% polymorphs; Feb. 6, W.B.C. 8,700—97% polymorphs; Feb. 7, Hb 90%, R.B.C. 4,450,000, W.B.C. 6,550—90% polymorphs; Feb. 10, Hb 103%, R.B.C. 4,040,000, W.B.C. 6,900—85% polymorphs. Sedimentation rate: Feb. 3, 10 mm., Feb. 5, 22 mm. per hour. Blood cultures on Feb. 4, 7, and 10 were negative. Throat cultures on Feb. 2 gave *Staph. albus*, and sputum cultures on Feb. 5 and 6 showed *Staph. albus* and pneumococcus. On Feb. 11 the spinal fluid contained 8 polymorphs and 68 lymphocytes per c.mm.; culture was sterile.

Radiographs of the chest on Feb. 8 revealed a large area of consolidation in the right lower lung field; both lung fields were filled with numerous small soft shadows.

Clinical Course (see Chart)

On admission the patient was placed on sulphadiazine, 1 g. every four hours by mouth. Despite this the temperature rose to 104° each afternoon, and he was moderately toxic. At times slight cyanosis was observed. On his fifth day in hospital rales were heard in the left chest. Because of increasing dyspnoea and cyanosis, oxygen was administered, with immediate disappearance of cyanosis. Moderate amounts of bloody sputum were expectorated. Sticky, bubbling, and crepitant rales and wheezes became audible throughout both lungs; inspiratory dilatation of the alae nasi and expiratory grunting were observed. On the sixth day in hospital sulphadiazine was stopped and the patient was transfused from another patient three weeks convalescent from severe atypical pneumonia. After 125 c.cm. of blood had been given the procedure was halted because of restlessness and increased dyspnoea. Five hours later the temperature had dropped sharply to normal, and the patient seemed greatly improved. The next day he complained considerably of generalized headache; fever recurred in the evening associated with considerable abdominal distension, which was relieved by rectal tube, turpentine stupes, and

posterior pituitary extract. Chemotherapy was resumed, with two 4-g. intravenous doses of sodium sulphathiazole ; a blood level of 2.6 mg. per 100 c.cm. was obtained. The oral dose of sulphadiazine was doubled to 2 g. every four hours, and the blood level rose to 12.5 mg. without clinical improvement. Dullness and bronchial breathing appeared in the right axilla. Although dyspnoea was diminished somewhat. the pulse rose from 120 to 140–150 and became thready at intervals. The patient became progressively less



responsive; moderate neck rigidity was noted, and motion of the head evidently caused pain. Fluids, sodium chloride, and glucose were given orally, by infusion, hypodermoclysis, and per rectum. The loss of panniculus and muscular atrophy were marked and progressive. Digitalization with 18 cat units of digitalis intramuscularly appeared to slow and strengthen the pulse. A second transfusion of 300 c.cm., using the blood of a two-weeks-convalescent who had had a moderately severe atypical pneumonia, was given on the tenth day without noticeable effect. On the eleventh day the patient could no longer swallow sulphadiazine tablets; and chemotherapy, having failed to produce any improvement, was discontinued. The pupils became widely dilated, the skin clammy, cyanotic, and mottled, and the eyes glazed. A third transfusion of 250 c.cm. of blood from a two-weeks-convalescent moderately severe case improved the patient's general condition somewhat, but during the night the pulse became irregular and thready, and respiration stopped. After intramuscular caffeine respiration was restored, and a large mucous plug was extracted from the pharynx. Three hours later respiration again stopped and further stimulation was unsuccessful; the heart ceased shortly thereafter. The patient died on the thirteenth day in hospital.

Necropsy Findings

Post-mortem examination was performed three hours after death. The body was well developed and moderately well nourished. There was slight rigidity, and livor of transient type was present in the dependent parts. Pupils were equal, 7 mm. in diameter. There was no discharge from ears, nose, or mouth. The thorax was symmetrical and the abdomen flat. Extremities revealed marked cyanosis. Superficial vessels and lymph nodes were normal.

Lungs.—The right lung weighed 1,260 g., and its size and position were as usual. It appeared uniformly bright red. The entire lung was firmer than normal, the most notable increase in consistency being present in the middle and lower lobes. The pleural surfaces were smooth and glistening, with the exception of a small area on the antero-lateral surface of the lung 3 cm. from the apex. Here there were several fine adhesive bands with minimal roughening. Sectioned surfaces of lung revealed intense bright-red colour of the parenchyma with moderate increase in moisture. Consolidation was of lobular and confluent lobular type. Several small areas of emphysema were present throughout the upper lobe. In the parenchyma of the upper lobe beneath the pleural adhesions several small areas of necrosis, measuring 1.5 mm. in diameter and appearing much like miliary seedlings, were observed. Yellow muco-purulent exudate pouted from the small bronchi, and the larger air passages were plugged with this secretion to within 3 cm. of the tracheal bifurcation. The bronchial walls were swollen and congested. Hilar nodes were slightly enlarged and firm. The left lung weighed 1,010 g. The left upper lobe was red, moist, and similar in appearance to the right lung. The lower lobe was nodular in appearance, and revealed marked increase in consistency. The cut surface of both lobes was intensely red, and the muco-purulent exudate was present throughout the bronchial tree. The hilar nodes were enlarged and firm.

Microscopical Examination of Lungs.—The alveoli contained varying quantities of exudate consisting of large numbers of mononuclear cells (macrophage type) and polymorphonuclears lying within a membrane-like layer of fibrinoid material and occasionally enmeshed in typical fibrin strands. The mononuclear cells predominated in most fields, but were about equalled by the polymorphonuclears in a few areas. Much of the alveolar epithelium had been stripped from the lining surfaces, and formed part, at least, of the mononuclear-type cells. The remainder occurred as a desquamated layer of cuboidal, columnar, or somewhat spheroidal cells. Occasional larger mononuclear cells with hyperchromatic nuclei and abundant cytoplasm were seen contiguous with the layer of alveolar epithelial cells. No inclusion bodies were seen in these cells. Some zones of interalveolar haemorrhage were present. Bronchi and bronchioles presented varying degrees of ulceration and deposition of abundant fibrinoid material. The remaining epithelium was of a stratified variety. The bronchial walls showed extensive lymphocytic infiltration, plasma cells, polymorphs, and some eosinophils. The pleura revealed some engorged vessels but no exudate. One section showed a nodular zone of fibrosis with a central area of caseous and coagulation necrosis. Rare foreign-body giant cells were present. No acid-fast bacilli were demonstrated with Verhoeff's acid-fast stain.

The heart, aorta, and vessels revealed no pathological changes. The spleen weighed 252 g. and measured 13.5 by 6 by 3 cm. It was red-grey in colour. The capsule stripped with slightly increased difficulty. The cut surface was deep-red and moist. Markings were vague, and pulp scraped slightly. Microscopical examination revealed areas of haemorrhage into the pulp with moderate increase in polymorphs. The liver, pancreas, and adrenals were normal. Gastro-intestinal and genito-urinary tracts were normal.

The Brain.—The dura did not appear swollen. Vessels were of average size. The leptomeninges showed no gross pathology. Spinal fluid was clear and there was no exudate. Convolutions and sulci appeared normal. The consistency of the brain was slightly softer than usual. On sectioning the cerebrum numerous pinhead-sized areas of dark-brown pigmentation were noted in grey and white matter. It could not be determined, by gross examination, whether these were small areas of haemorrhage or inflammation. The cerebellum, pons, and medulla were normal.

Microscopical Examination of the Brain.—This revealed frequent foci of increased cellularity in white matter of sections from parietal, temporal, and occipital lobes, from the region of the basal ganglia, paraventricular (III, IV) tissue, and cerebellum. These were located in juxtaposition to or surrounding small vessels, and were usually associated with a ring of peripheral haemorrhage. Cells forming these foci were astrocytes and microglia, with predominance of the former, and occurred in a density approximately ten times that of the regional white matter. There was slight phagocytosis of erythrocytes in a few areas. The grey matter presented occasional large swollen, diffusely staining cells. The ependyma of all ventricles was negative. Leptomeninges presented areas of lymphocytic perivascular infiltration in sections from parietal and temporal zones. Vessels both of leptomeninges and of brain parenchyma were considerably engorged, and scattered " ring " haemorrhages without focal cell proliferation were present in grey and white matter.

Diagnosis

Lungs.—(1) Pneumonia—primary, atypical, of lobular and confluent lobular type—with ulcerative bronchitis and membraneous and interstitial pneumonitis. (2) Tuberculosis—minimal, old, focal, inactive.

Brain.—Encephalitis—acute. (Encephalitis is used in the general sense and not necessarily as the designation of direct reaction to the specific infectional agent. The severity of the reaction and doubt as

to the purely degenerative character of the lesions make this term seem preferable to encephalopathy or encephalosis.)

Bacteriology.—Cultures from brain, heart, and right and left lung were all sterile at the end of 72 hours.

Virus Studies.—The following virus studies were negative: (1) Lung tissues were inoculated into twelve mice, one rabbit, and one guinea-pig intranasally by Major T. F. McNair Scott, M.C., U.S.A. (2) Glycerinated lung tissues were inoculated into cotton-rats and were reported as non-effective by Dr. C. H. Andrewes, National Research Institute, Hampstead. (3) Brain tissues were inoculated by Major McNair Scott intracerebrally into six mice, one rabbit, one guinea-pig, and one hamster. The rabbit died with encephalitozoon infection on the fifth day after inoculation.

Discussion

Clinical descriptions of cases of atypical pneumonia often stress the frequency and severity of headaches. Thus out of 87 cases we have observed at one hospital, 41 (47%) complained of headache—14 mild, 6 moderately severe, and 21 severe. The headache is usually frontal or ocular, though it may be generalized in severe cases. It occurs as a rule at the onset of the disease, and is rarely absent in severe cases of atypical pneumonia. Coughing increases the headache considerably.

Excluding the case reported above—the sole fatality in our series—lumbar puncture was performed in only one other case. This was one with severe frontal headache but no signs of meningitis or encephalitis; spinal fluid was normal. We have had under observation another patient who, during a previous attack of atypical pneumonia, had severe headache and positive Babinski, Chaddock, and Oppenheim reflexes. Unfortunately lumbar puncture was not performed. Recovery was complete.

Apparently our patient died of encephalitis rather than of pneumonia, since dyspnoea and rales became less in the last few days and abdominal distension disappeared. Indications of central nervous system involvement appeared abruptly on the sixth day in hospital, when the patient began to complain of severe headache. At the same time the temperature rose and slight neck rigidity was noticed. This encephalitis must be distinguished from a post-infectional encephalitis, which is characterized histologically by patchy areas of demyelinization. These were not a prominent feature in this case, in which the brain lesions resembled more closely those of epidemic encephalitis.

If our case of atypical pneumonia was due to a virus it might be conjectured that, as with analogous virus infections, antibodies would develop in the blood of convalescents, and that transfusions of convalescent blood might favourably affect the course of the disease. Flexner and Garon (1943) report three cases in which small transfusions from convalescents were administered. Two of these patients, very ill at the time of transfusion, eventually died; the third, who had had a sustained temperature of about 103°, became afebrile within 24 hours and remained well. Kneeland (personal communication) has informed us of two unpublished cases in which convalescent blood was employed. In one case a husband, three weeks convalescent, gave 500 c.cm. of blood to his wife, who had apparently contracted the infection from him. The patient, who was pregnant and desperately ill, showed marked and rapid improvement. In the other case, receiving only 50 c.cm. of convalescent blood, no apparent benefit was obtained.

Our patient seemed to show a remarkable, though transient, response to the first transfusion; this was manifested by a rapid drop in temperature to normal, and by definite clinical improvement. The second transfusion appeared to have no effect. The third seemed to benefit him somewhat without affecting the temperature. The amounts of blood given on each occasion were small, as circulatory failure was feared from a larger transfusion. Yet the smallest transfusion, the first, appeared to have the greatest effect. The first donor had been the most severely ill of the three and had been longer convalescent than the others. Thus it might be supposed that his serum would have a higher antibody titre than the others'.

Summary and Conclusions

A case of fatal atypical pneumonia with encephalitis is presented, with necropsy findings.

The incidence of encephalitis in atypical pneumonia is discussed.

Convalescent blood transfusion in atypical pneumonia is considered.

Special thanks are due to Lieut.-Col. Yale Kneeland, jun., M.C., U.S.A., for the unpublished data recorded above. We are deeply indebted to Lieut.-Col. John B. Hazard, M.C., U.S.A., for the histopathological descriptions and review of findings in the reported case.

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THE FAILURE OF H 11 TO INHIBIT GROWTH OF TUMOURS IN MICE

BY

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(From the Laboratories of the Imperial Cancer Research Fund)

The preparation known as H 11, which is being used in the treatment of cancer, is an extract of urine. It is claimed that the extract contains "anti-growth substances" which have "an inhibitory effect upon cancerous growth." The method of preparation of H 11 and the standardization of the "growth-inhibitory power" of the product by its effect in checking the growth of oat seedlings are described by Thompson and his collaborators (1941). Thompson, Holt, and Forbes Jones (1943) claim that certain fractions of urine have been obtained which stimulate the growth of transplanted tumours. The urine is fractionated by precipitation with copper salts; the precipitate is extracted with dilute hydrochloric acid, which yields a tarry substance partially soluble in sodium hydroxide. The part soluble in alkali is said to accelerate growth, and therefore it would appear that by removal of the "growth-promoting fraction" the "growth-inhibiting properties" of the residue are increased. The improved extract is called 80 K.

It is not our purpose to examine or discuss the general questions of "growth promotion" and "growth inhibition" in relation to the problems of the pathology and treatment of cancer. We wish simply to put on record the results of experiments designed to test whether H 11 or the new improved preparation obtained after precipitation with copper salts does in fact inhibit or affect in any way the growth of cancer cells. Mr. J. H. Thompson of Hosa Research Laboratories has provided generous supplies of H 11 and of his new preparation 80 K; for his kindness we wish to express our indebtedness.

General Remarks on the Testing of "Cancer Cures"

In these laboratories we have gradually worked out routine methods of examining substances supposed to have valuable therapeutic properties for cancer. Our first step is usually a test of the direct action of the substance on cancer cells. For this purpose we use the technique of tissue culture. The substance to be tested is applied in various dilutions to cultures consisting of growths of normal and malignant tissues. The growth of the tissues is measured before and after varying periods of treatment. Control cultures are measured at the same time. From the two sets of measurements the extent to which normal and malignant growth are influenced by the substance can be calculated. Confirmatory tests are made by adding the substance under investigation, in the weakest concentration previously found to arrest malignant growth, to the

media used in preparing the cultures of normal and malignant tissues. Growth of normal tissues in such cultures, and concurrently no growth of the malignant tissues, would indicate a specific inhibitory action upon malignant growth. Treated cultures are examined microscopically for any cellular changes that might have been induced. The estimation of the significance of any changes requires a thorough acquaintance with the morphology of the tissues employed, during both growth and degeneration.

Our second step is to test the effect upon transplantable tumours growing in animals. A convenient method is to take one of the well-known transplantable tumours which have been observed over a period of years and whose growth behaviour is well known. It is important to select a tumour which when grafted gives a high percentage of "takes" and which recedes rarely. Many tumours which are widely used in cancer research are apt to retrogress after some preliminary growth. Such tumours are obviously unsuitable for research in therapeutics. An example of such a tumour is the Brown-Pearce skin carcinoma of the rabbit. The Imperial Cancer Research Fund possesses two transplantable mouse cancers which are eminently suitable for testing chemotherapeutic substances; they are the mammary carcinoma No. 63 and the spindle-cell sarcoma No. 37. Both graft easily, giving 95 to 98% of "takes" in mixed laboratory stock mice; both tumours grow steadily and kill the host in three to four weeks. Retrogressions are not more than about 1%. Injections of the therapeutic substance are made at a site remote from the tumour and are not begun until the graft has become vascularized and the "daughter tumour" is palpable.

Although these two well-known transplantable tumours are suitable for preliminary tests of the "growth-inhibitory" properties of any substance or preparation, we should not regard even a conspicuous retardation of tumour growth as being valid unless confirmation could be obtained on tumours of a homozygous strain of mice grown in the same strain. The grounds for such scepticism are well known and have often been stated in Reports of the Imperial Cancer Research Fund. Briefly the reasons for this extra precaution are as follows:

The tumours 37 and 63 occurred sporadically in two mice of mixed stock more than 30 years ago, and grafting was carried on, again in mixed stocks, until grafts grew readily in a high percentage. These tumours have now been carried through hundreds of generations of mice, but they are still foreign cells so far as the grafted host is concerned. There is in some mice an antagonism to these foreign cells, and in such mice retrogression of grafted tumours occurs. In spontaneous tumours of mice or men the cells of the tumour belong to the body, are a part of the body, and there is no such resistance to their presence in the body. The final test of any therapeutic method in cancer must evidently be made on spontaneous tumours, since these are the strict equivalent of human cancer; the variations which naturally exist among tumours must of course be kept in mind. Spontaneous tumours, even if of the same organ—for example, cancers of the breast—do not all grow at the same rate and behave in the same way. While the majority of mice with such tumours survive a comparatively short time—a matter of weeks—after being noticed clinically, some live for months. There is thus no uniformity in the growth rate of the tumours, and consequently, in order to get reliable therapeutic results of an order short of rapid complete cure, it is necessary to treat large numbers of animals, leaving an equal number of untreated controls. It is probable that some of the good reports and the optimism which seem to accompany many "cancer cures" tried out on human beings have their source in the fact that some cancers do not kill their hosts quickly. The case which naturally survives a long time and which is under a new treatment may be regarded as a proof that the new treatment has been to a certain extent effective. The credit belongs to Nature, not to Art. As a consequence of such apparent success other cases are treated similarly, and this goes on until at last the remedy is abandoned.

We are able to evade these complexities and to detect minor inhibitory effects by the use of homozygous strains of mice. Tumours arising in a homozygous strain grow uniformly when grafted in mice of the same strain; there is no resistance to their growth, and such tumours are for practical purposes comparable with spontaneous tumours. The strains most commonly used in the laboratories of the Imperial Cancer Research Fund are Strong A, Paris R 111, and C 57 black.

Results of Treatment with the Preparations H 11 and 80 K on Animals bearing Tumours

The following tumours have been used in our tests:

(1) Strong A carcinoma growing in pure-line Strong A mice; 10 treated and 6 controls.
(2) Methylcholanthrene C 57 sarcoma growing in C 57 mice; 6 treated and 6 controls.
(3) Mammary carcinoma 63; 6 treated and 6 controls.
(4) Spindle-cell sarcoma 37; 6 treated and 6 controls.

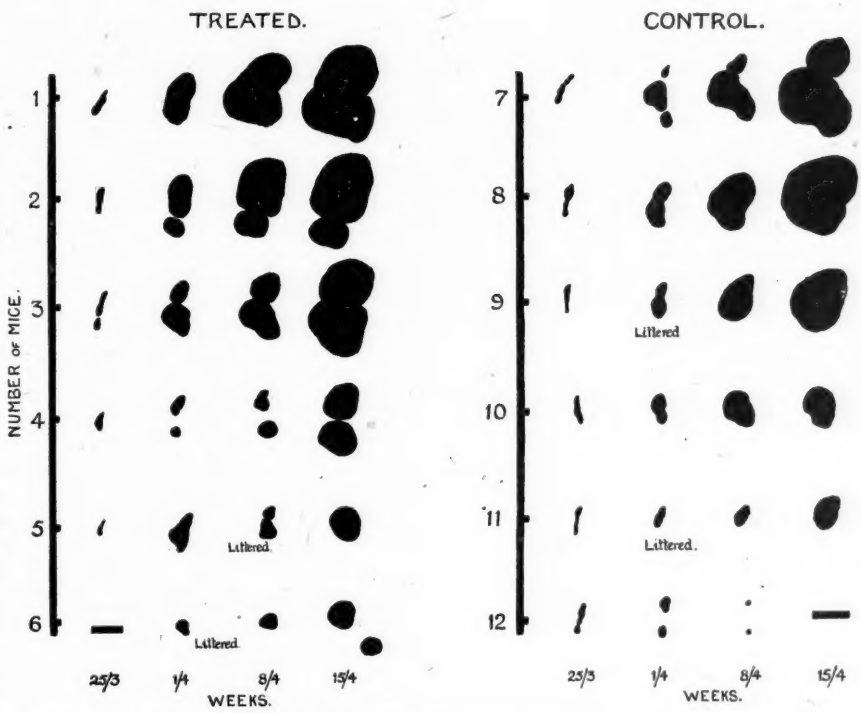
Mr. Thompson recommends the injection of 1 c.cm. intraperitoneally twice daily. Although we cannot believe that intraperitoneal injections are of vital importance in the treatment—and it is unlikely that the recommendation is insisted upon in the treatment of human cases—we have nevertheless followed Mr. Thompson's method in three out of the four tests, but always with due regard for the health of the treated animals. Intraperitoneal injection of 1 c.cm. twice daily becomes an ordeal for a 20-g. mouse; it is the equivalent of 14 lb. of fluid injected daily into the peritoneal cavity of a 10-st. man. As soon as the weight of a mouse began to drop appreciably the subcutaneous route was employed in order to give the animal a chance to recover. It should be noted here that any treatment which depresses the animal's health, or even an intercurrent infection, may retard the growth of a transplanted tumour. Many transplanted tumours cease to grow, or the growth rate falls strikingly, when the host becomes pregnant. This applies particularly to the mammary cancer No. 63. It will be observed from these brief comments that thorough and critical examination of a "cancer cure" demands experience and knowledge of the behaviour of transplantable tumours.

The rigid application of these rules has been relaxed in our tests of H 11. Thus with tumour 37 we "favoured" the remedy by infiltrating the growing margins of the tumour with H 11; while with tumour 63 almost all the rules were broken, as will be shown later. With Strong A carcinoma and C 57 sarcoma we adhered strictly to the rules which we have adopted to exclude a deceptive appearance of a favourable effect.

In all our experiments with mice the tumours in the treated animals grew steadily and at the same rate as in the controls. We could distinguish no "growth-inhibitory" effects whatever. With the rapidly growing tumour 37 the growth of both treated and untreated tumours was so rapid that the experiment came to an end after 11 days: the tumours had become so large that further treatment was unjustifiable. The Strong A carcinoma grows more slowly, and treatment has been more prolonged—30 days; but again there was no evidence of any checking of growth or of any alteration in the cellular structure of tumours of animals killed during the course of treatment. The C 57 sarcoma was likewise unaffected.

One experiment only need be given in any detail, since it is representative in its negative results. Moreover, it was set up after it had become evident that H 11 does not inhibit the growth of tumours, and was consequently planned to give the treatment every advantage that could be justifiably arranged. In the first place, we were enabled to use the latest improved extract 80 K, which, in Mr. Thompson's words, "has proved particularly potent as an inhibitor to malignant growth." In the second place, instead of grafting the tumour cells in our mixed stock mice, in which the tumour grows very rapidly, we grafted 12 mice of the inbred homozygous strain Paris R 111; the tumour cells grow more slowly in these mice, especially during the ten days following grafting, and regressions are more common. The tumour cells were thus placed in a comparatively uncomfortable environment, and it might be expected that a "growth inhibitor" would have a good chance to show its powers in such circumstances. The rules for testing chemotherapeutic substances were further violated by beginning injections of the extract only four days after grafts had been made—that is, a week before any daughter tumour could be palpated. The "growth inhibitor" was

injected twice daily—mostly intraperitoneally, but subcutaneously when the health of the animals became affected—from March 22 to April 15 inclusive; 25 days in all. The accompanying chart illustrates the growth of the treated and untreated tumours. A glance at it shows that Mr. Thompson's extract has not inhibited the growth of the tumours; there is no difference beyond chance variation between the treated and untreated animals. In this experiment the lack of "growth-inhibitory" power became evident very early; for in spite of injections being started before palpable tumours had appeared and when the amount of living tumour tissue could not have been more than 0.02 c.cm. — the volume of the original inoculum —measurable tumours equal to those in the control mice were present after 8 days of treatment. These continued to grow normally, as the chart shows. The sizes attained by the tumours can be gauged by the weight of tumour in Mouse 1 of the chart on April 15; it was weighed after removal, and equalled 9.9 g.



Paris R 111 strain of inbred mice grafted with mouse carcinoma 63 on March 18, 1943. Mice 1 to 6, inclusive, treated with 80 K. Injections were begun on March 22, and were continued daily to April 15.

The results of tests on tissue cultures were also negative. The tumours used were carcinomas No. 63 and Strong A, and C 57 sarcoma; the normal tissues used for comparison were embryo heart fibroblasts and embryo kidney. In experiments in which H 11, in a final concentration of about 1 to 4, was added to 3-day-old cultures in active growth there was no detectable influence on the normal or malignant cells. When the urine extract was added to the medium immediately the tissues were explanted, it was found that in final dilutions of 1 in 2 normal and malignant cells were killed equally; in dilutions of 1 in 10 growth was equal in normal and malignant cells. No specific inhibition of growth of tumour cells was observed.

From the results of these investigations we conclude that H 11 has no "growth-inhibitory" effects on the tumours used in the experiments.

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OBSERVATIONS ON THE USE OF H 11 IN CARCINOMA

BY

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During the past two years an increasing number of workers have described growth-inhibiting properties of urinary extracts. Turner (1939) indicated an inhibiting effect from an alcoholic fraction of urine, while Bowman and Mottshaw (1941) studied the growth-inhibiting properties of a similar extract on tumour growth. Other workers include Rohdenburg and Nagy (1937) and Murlin *et al.* (1939), who claimed anticarcinogenic properties for such extracts. Thompson *et al.* (1941) published a preliminary account of the preparation of an alcoholic fraction of urine named H 11, and described not only its biological properties and anticarcinogenic action in transplanted animal tumours but also the inhibitory effect on human cancer.

The Present Investigation

An investigation into the effect of H 11 extract on carcinoma was begun at the Kingston County Hospital in Oct., 1940, and it is now thought advisable to issue an interim report, although no conclusions can be drawn, as the cases have not been followed up for a sufficient period.

Of the 51 advanced cases 14 received insufficient treatment, and of the remaining 37 patients 11 are dead and no reply was received from 5. Of the 21 patients known to be alive 4 have been under observation for under one year, 12 for over one year, and 5 for over eighteen months. All the surviving cases except two received some other form of therapy, and in these two—Nos. 18 and 38—the diagnosis was not confirmed, as biopsy could not be performed.

The series (see Table) contains different types of carcinoma situated in various parts of the body. In most instances the condition was inoperable, and usually the patient was in poor general health, although there was considered to be a sufficiently reasonable expectation of life to justify treatment. This period of time was assessed at six weeks in accordance with the statement made by Thompson that objective signs of improvement do not usually occur until such an interval of treatment has elapsed. Some cases had other treatment, including operation and radium, but with few exceptions they were cases in which the operation or radium therapy was considered to be insufficient to eradicate the local disease.

There is some evidence that in a few cases the rate of growth has been slowed up or inhibited, but in no case confirmed by section has, as yet, any growth disappeared as the result of H 11 therapy only. Further research is essential in order to purify the extract, and a more satisfactory method of dosage must be evolved so as to keep the concentration in the blood at a constant level.

No case of carcinoma should be treated by H 11 alone unless a competent surgeon has advised that it is inoperable and unsuitable for radiotherapy, etc. Treatment must be given for at least six months, and the cost should be carefully considered before advising or starting this form of therapy.

H 11 extract has been supplied for this investigation by the generosity of Standard Laboratories, who have prepared the extract. All the research and experimental work has been carried out at the Hosa Research Laboratories by the Director of Research, Mr. J. H. Thompson, and his staff.

Case	Age and Sex	Date of First Injec.	Pathology	Previous Treatment	No. of H 11 Injec.	Result of Examination April, 1942	Result of Examination October, 1942
1	F 57	7/10/41	Infilt. left broad lig.; col.-celled carc. vagina	Radium	63	Less pain. Died 3/1/42	
2	F 35	19/2/42	Adenocarc. breast; sec. lungs and retina	—	496	Less pain; growths stationary	Wt. 9 st. Pain back and shoulders. Totally blind. Can get about, but becoming weaker
3	F 39	4/3/41	Solid trabecular polygonal carc. cervix, Grade III	Radium	24, irreg.	Died Sept., 1941	
4	F 61	17/2/41	Carc. cervix, Grade III	Radium; hysterectomy; pre-sacral; neurectomy	950	G.C. v. good 1/5/42. N.A.D. per rectum, vagina, and pelvis; no pain, no discharge	G.C. good; rather pale; no pain or discharge; working full day; wt. 9 st., stationary. P.R., utero-sacrals thickened
5	F 46	21/5/41	Squamous carc. cervix, Grade III–IV	Pre-sacral neurectomy; radium	22, irreg.	Died 2/12/41	
6	F 53	7/6/41	Squamous carc. cervix, Grade III	Radium; pre-sacral neurectomy	20, irreg.	Died 16/8/41	
7	F 56	11/2/41	Solid trabecular polygonal and cubical carc. uterus	Radium; subtotal hysterectomy	120	Died 21/12/41	
8	M 69	11/7/41	Carc. prostate; renal calculi	Suprapubic cystotomy	30, irreg.	Died 6/9/41	
9	M 20	7/1/42	Mucus-secreting carc. rectum	Colostomy	62, irreg.	Died 10/3/42	
10	F 46	7/1/42	Mammary carc.; spastic paraplegia	—	31, once daily	Return of sensation in lower limbs, 19/3/42. Died 28/4/42	
11	F 56	6/10/40	Papillary carc.; cyst ovary; sec. in peritoneum	Total hysterectomy	119, irreg.	G.C. v. good; no pain, no ascites	Letter states now well. No symptoms
12	F 46	18/3/41	Carc. stomach and ovary	—	10	Died 27/3/41	
13	M 55	26/2/41	Carc. stomach	—	21	G. C. fair; no vomiting	Dead
14	F 60	21/8/40	Carc. uterus	Total hysterectomy; supra-pubic cystotomy	84, once daily	Died 10/2/41	
15	M 68	10/10/40	Carc. stomach and lower end oesophagus	Gastrostomy	22, irreg.	i.s.q.	No reply
16	M 70	18/12/41	Columnar carc. stomach	—	120, irreg.	Died 25/2/42	
17	F 51	July, 1941	Malignant ovarian; numerous small metastases; ascites	Laparotomy; left oophorectomy	520	N.A.D. abdomen or pelvis. G.C. v. good; gaining weight; no pain, no ascites	G.C. good; no pain or symptoms. Injections stopped in March. No signs of recurrence. Gaining weight
18	F 60	Oct., 1940	Carc. rectum; sec. liver. Not confirmed by section	Laparotomy	460	N.A.D. per rectum except slt. thickening of recto-vaginal septum. G.C. very good	Very well; no symptoms or abnormal physical signs
19	M 72	Feb., 1941	Carc. rectum	Colostomy	650	Growth now involving anus. Wt. constant; G.C. i.s.q.	Gets about, but G.C. poor and pain+. Refused further injections; growth extending.
20	F 56	Dec., 1941	Carc. cervix, Grade III	Radium; pre-sacral neurectomy	186	No ulcer, no pain, no haemorrhage; gain in wt.; G.C. imp.	G.C. good; wt. 12 st. 6½ lb.; no symptoms or signs of recurrence
21	F 68	Dec., 1941	Carc. vagina	Colostomy; pre-sacral neurectomy; rt. int. iliac ligatured	182	G.C. improved, less discharge; losing weight. Died 18/6/42	
22	F 60	May, 1941	Transitional carc. cervix, Grade III	Radium; pre-sacral neurectomy	380	G.C. good; gaining weight; no pain	G.C. v. good; wt. 11 st. 13 lb.; no pain or symptoms, slight thickening of rt. utero-sacral lig.
23	M 63	July, 1941	Cylindroma of salivary glands	—	248	Mass of glands in neck enlarging	Dead
24	F 53	Jan., 1942	Solid trabecular transitional and squamous carc. cervix, Grade III	Radium; laparotomy; pre-sacral neurectomy	188	N.A.D. in abdomen. G.C. v. good; no discharge, no haemorrhage; gaining weight	No reply
25	F 45	June, 1941	Squamous and prickle-celled carc. uteri, Grade III	Radium; subtotal hysterectomy; colostomy	1,116	No pain; gain wt.; N.A.D. in pelvis; G.C. very good	G.C. v. good; wt. increasing; no symptoms or signs of recurrence. Colostomy to be closed.
26	M 66	Mar., 1941	Carc. bronchus	—	730	Pain relieved for a time. Mass in neck now ulcerated through skin	Dead
27	F 53	May, 1941	Solid trabecular polygonal and transitional carc. cervix	Radium; Wertheim's hysterectomy; pre-sacral neurectomy	744	No pain; no discharge; N.A.D. in abdomen. G.C. impd.; gain in wt. Vesico-vaginal fistula from radium necrosis	G.C. good; wt. increasing. 9 st. 12 lb. No recurrence. Has vesico-vaginal fistula, some thickening of rt. utero-sacral lig.
28	F 79	Apr., 1941	Transitional and squamous trabecular carc. cervix, Grade III	Radium	616	Less pain. Died Dec., 1941	
29	F 75	June, 1941	Malignant melanoma of neck	Local excision	342	No recurrence. Two months after discontinuing H 11 small gland appeared. Block dissection April, 1942	G.C. fair; wt. 8 st. 8 lb., increasing. Some pain in shoulder, but *x*-ray N.A.D. and no signs of recurrence
30	M 44	20/4/41	Carc. rectum; metastases in abdominal and inguinal glands	Colostomy	153	Primary growth i.s.q.; inguinal glands smaller. G.C. good; gain in weight. Died 25/4/42	
31	F 58	Sept., 1941	Solid trabecular and squamous carc. cervix, Grade III	Radium; pre-sacral neurectomy	424	No pain, no discharge; gain wt. G.C. v. good	No pain or discharge. Still having 5 c.cm. daily
32	F 39	Feb., 1942	Gastric carc.	Laparotomy	220	Little pain; G.C. fair; vomiting	Now complains of pain and vomiting, and has abdominal tumour, probably Krukenberg
33	M 68	27/6/41	Carc. prostate	—	538	25/4/42: Prostate i.s.q.; has retention of urine; G.C. satisfactory	No reply
34	M 70	Dec., 1941	Columnar carc. prostate; mass in left lung	Deep *x*-ray	58	Died Feb., 1942	
35	F 62	Jan., 1942	Carc. cervix	Radium; pre-sacral neurectomy	98	Died 9/3/42	
36	F 56	Sept., 1941	Squamous prickled and horny carc. cervix, Grade III	Radium	256	Repeat radium March, 1942. Growth checked; G.C. impd.; gain in wt.; no discharge, pain, or incontinence. Died 28/4/42	
37	F 66	July, 1941	Squamous carc. cervix, Grade III–IV	Radium; diathermy	1,116	No pain; G.C. satis. N.A.D. in abdomen; utero-sacral ligs. still thickened	G.C. v. good; wt. 14 st. 4 lb., increasing; no symptoms; no signs of recurrence, but some thickening of both utero-sacral ligs. Injections now stopped

Case	Age and Sex	Date of First Injec.	Pathology	Previous Treatment	No. of H 11 Injec.	Result of Examination April, 1942	Result of Examination October, 1942
38	M 53	June, 1941	Carc. prostate; not confirmed by section	—	620	Gland normal; gain in wt.; G.C. v. good; micturition normal	G.C. v. good; no symptoms; no nocturnal frequency. P.R., prostate soft; rt. lobe +
39	F 58	Oct., 1941	Squamous carc. cervix, Grade III	Radium	744	No discharge, no symptoms, no pain; G.C. impd. 22/4/42	G.C. v. good; wt. increasing, 7 st. 13 lb.; no pain or symptoms; no signs of recurrence. Injections now stopped
40	F 47	July, 1941	Squamous carc. of cervical stump; had hysterectomy several years previously for fibroids. Large ulcerating mass	Radium; pre-sacral neurectomy	558	V. sat. condition; some scarring vaginal walls; no pain; a little loss of wt.	G.C. v. good; lost 10 lb. in wt. since April; has thickening rt. utero-sacral lig. and small mass in pelvis. To have further injections
41	F 45	Aug., 1941	Squamous carc. cervix, Grade III	Radium; pre-sacral neurectomy; Wertheim's hysterectomy	558	N.A.D. abdomen; no pain; G.C. v. good; scarring and a little thickening of vaginal vault	G.C. v. good; wt. 11 st. 6 lb. Injections stopped in April, 1942. No symptoms; P.R., both utero-sacrals thickened
42	F 47	Sept., 1941	Carcinoma cervix, Grade IV	Radium	447	N.A.D. abdomen; no haemorrhage; no discharge; G.C. v. good. P.V., scarred cervix	Gradually lost wt. and pain recurred. Died 11/8/42
43	F 56	Oct., 1941	Solid trabecular transitional and squamous carc. cervix	Radium; pre-sacral neurectomy	249	G.C. v. sat.; gain in wt., 10 st. 7 lb.; no pain; slight cervical scarring	G.C. good; wt. 11 st. 2 lb.; no symptoms but tiredness; utero-sacral ligaments thickened. To have further injections
44	M 60	Sept., 1941	Carc. prostate	—	98, irreg.	—	Doctor states G.C. good; wt. stationary; no pain; working, and feels well
45	M 21	Jan., 1942	Carc. rectum	—	188	Died	
46	F 46	Jan., 1942	Carc. cervix	Radium	150	Condition worse	Died
47	F 26	30/10/41	Carc. stomach	Gastrectomy	240	27/2/42; Epigastric tumour; G.C. deteriorating; losing wt.; vomiting +	No reply
48	F 60	13/1/41	Carc. uterus	Wertheim's and radium, followed by recurrence and suprapubic cystotomy	200	No improvement. Died 10/2/42	
49	F 70	9/10/41	Carc. cervix, Grade II	Radium	300	22/4/42: Satis.; G.C. good; no secs. palpable	Dead
50	F 29	1/11/40	Carc. ovary	Ovariotomy; glands +	19, stopped at patient's request	V. rapid growth, causing intestinal obst. Died 19/12/40 ? accelerated by withdrawal of growth-inhibiting factor	
51	F 60	28/8/41	Carc. breast (scirrhous)	Nil; patient refused operation or radiotherapy	540, irreg.	19/6/42: Operable. Growth slowly increasing: started approx. 1" in diameter, now 1½"	No reply

I wish to express my thanks to the medical and nursing staff of the Kingston County Hospital for their assistance, and to the general practitioners who have co-operated in giving the injections to the patients in their own homes. In particular I am indebted to Mr. J. V. O'Sullivan for his great interest in this research and for his valuable suggestions.

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CUTANEOUS HYPERSENSITIVITY TO SULPHONAMIDES

A REPORT OF 12 CASES

BY

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The following cases illustrate a type of sulphonamide eruption which is being recognized with increasing frequency in the Middle East, but to which I am unable to find any reference in the literature at my disposal. In a previous report from this hospital on sulphonamide eruptions of the photosensitive type (Park and Platts, 1942) it was pointed out that these rashes almost invariably begin after 7 to 10 days of sulphonamide therapy, when there is presumably a high concentration of the drug in the blood. One case, however, was quoted in which there was a severe dermatitis beginning immediately after the first doses of sulphanilamide, differing from the delayed eruptions in its exudative character. An analogy was drawn between this condition and the experimental observations of Epstein (1939), who obtained erythematous and exudative reactions respectively to ultra-violet irradiation of the sites of two successive injections of sulphanilamide, nine days apart. This phenomenon he christened "photo-allergy." The cases reported below are all of the immediate type, some of the generalized ones being unmistakably photosensitive, and it has been found that all of them have had sulphonamides applied to the skin some time before their eruptions.

Case I

On Aug. 16, 1942, Private B., aged 36, developed a seborrhoeic intertrigo of the left axilla. On the 19th this became pustular, and sulphanilamide ointment was applied, clearing up the secondary infection and leaving the intertrigo as before. He gave a history of a widespread eruption, lasting several weeks, following sulphanilamide dressings to a wound of the back 8 months previously. On Aug. 23 he developed acute tonsillitis, and was given three 0.5-g. doses of sulphanilamide by mouth. That evening the intertrigo became worse and a general rash appeared.

Next day, on admission to hospital, he showed a weeping eczematous intertrigo of the axilla and a diffuse papular dermatitis of the trunk and limbs. He received no more sulphanilamide until Sept. 1, when his tonsillitis recurred. Three 4-hourly doses of 1 g. were then given, and that evening the entire eruption recurred, more severely than the first time. It took two weeks to clear. On Sept. 23 0.5 g. of sulphapyridine caused a mild erythematous reaction at all the previous areas, lasting two days. On Sept. 26 1 g. of sulphaguanidine produced no reaction. On the 27th 5 g. of sulphaguanidine gave a mild erythematous reaction. On Oct. 1 1.5 g. of sulphathiazole caused no reaction.

On Oct. 4 a paste consisting of equal parts of sulphanilamide, starch, soft paraffin, and lanolin was applied to several test areas. This caused an immediate reaction in the left axilla, but none on any other part of the skin. Intradermal tests were carried out with 0.01, 0.1, and 1% of sulphanilamide in normal saline, using controls of normal saline alone. Only the 1% gave a reaction, consisting of a raised erythema, beginning in about 4 hours and lasting 24 hours.

Case II

On Aug. 1, 1942, Leading Aircraftman T., aged 38, suffered abrasions of the left elbow which became infected and were treated with eusol and sulphanilamide, applied locally. On Aug. 8 an

eruption appeared; by Aug. 28, when he was admitted to hospital, this had spread to involve the whole forearm. It was an acute weeping dermatitis. On Sept. 9 he developed acute tonsillitis, and was given sulphanilamide in an initial dose of 2 g. and three 4-hourly doses of 1 g. That evening he developed an acute papulo-vesicular dermatitis of the trunk and limbs and an exacerbation of the left forearm.

Test applications of sulphanilamide paste were negative. Sulphapyridine 2 g. gave no reaction, but there was an erythematous reaction of the trunk after 5 g. of sulphaguanidine. No reaction was obtained from 1.5 g. of sulphathiazole. Intradermal and scratch tests with 1% sulphanilamide were negative.

Case III

About the middle of July, 1942, Private M., aged 23, developed a " desert sore " (ecthyma) of the right forearm. It was treated at first with eusol and later with local application of sulphanilamide and cod-liver oil: a dermatitis followed in the area treated. By the end of August the whole forearm was affected, and then the face, hands, and feet. He was admitted to hospital, and on mild applications the condition settled down in two to three weeks.

On Sept. 18 one application of sulphanilamide paste was made to the right forearm, where an immediate acute exudative reaction took place. On Sept. 25 a test dose of 0.5 g. of sulphanilamide was given orally. A few hours later the patient developed an acute vesicular dermatitis of the right forearm and both hands and feet. On Sept. 27 a sulphanilamide paste was applied to the face, with an immediate reaction, and to the left forearm (which had never been the site of eruption), with no reaction. On Oct. 13 0.5 g. of sulphapyridine gave no reaction, but 2 g. next day produced a mild erythema at all the previous sites, lasting a few hours only. From Oct. 16 to 22 doses totalling 12 g. of sulphaguanidine and 4.5 g. of sulphathiazole were given with no effect.

Case IV

On Aug. 6, 1942, Sapper R., aged 35, suffered an abrasion of the left elbow, which developed infection and was dressed with sulphanilamide. A dermatitis subsequently appeared on the forearm, and by Aug. 18 had spread to other parts of the body.

He was admitted to hospital on the 20th with a bullous dermatitis and subcutaneous oedema of the left elbow, a papulo-vesicular eruption of the face, scalp, neck, trunk, arms, hands, and legs, and a mild crural and intergluteal intertrigo. His temperature was 101°. He was given 2 g. of sulphanilamide followed by 1 g. 4-hourly; the drug was discontinued two days later, since there was no improvement, the temperature chart varying from 99° to 102°. This then subsided in two more days and his skin steadily improved. On Sept. 26 1 g. of sulphanilamide was given with no reaction, but on the next day three similar doses caused a sharp flare-up of the left arm and a milder erythema of the face, neck, hands, and feet.

On Oct. 6 three doses of 5 g. of sulphaguanidine gave a papulo-vesicular reaction on the left forearm only. Sulphapyridine 15 g., in divided doses over three days, gave a mild papular reaction on both forearms. Applications of sulphanilamide paste, and intradermal and scratch tests, were negative with 1% sulphanilamide.

Case V

About the beginning of Sept., 1940, Warrant Officer D., aged 40, developed lesions of impetigo and ecthyma on the arms, which were treated with acriflavine and later with sulphanilamide powder. About the middle of September areas of dermatitis appeared on both arms, and on the 29th an eruption occurred on the hands, legs, face, and trunk.

He was admitted to hospital on Oct. 3, when he had circumscribed areas of moist dermatitis round the sites of previous ulcers on the left forearm and right hand. There was a more recent vesicular and pustular dermatitis on the legs, hands, and face, and in scattered areas on the trunk. Intradermal tests with sulphanilamide gave a reaction with the 1% strength only, starting in 24 hours and lasting 3 days. On Oct. 13 0.5 g. of sulphanilamide, given orally, caused irritation on the existing areas and the appearance of a few new papules. Application of sulphanilamide paste to the area of subsiding dermatitis on the left forearm produced a distinct erythematous and papular reaction.

Case VI

About the middle of Aug., 1942, Private R., aged 25, developed some desert sores on both knees. These were treated by dusting sulphanilamide powder on them and dressing them with acriflavine gauze. An ulcer on the right knee healed in three days, but two on the left knee healed only very slowly. About the middle of September a patch of dermatitis began round each of these, with which he was admitted to hospital on the 21st. They were about 4 to 5 in. in diameter, with a weeping and scaly surface and fairly sharp margins. Both these areas became dry on rest in bed and simple dressings. On Sept. 29 one application of sulphanilamide paste to the milder of these areas caused it to weep profusely, while the other remained dry. Applications to the other knee gave no reaction.

A positive reaction was obtained to 1% intradermal sulphanilamide, none to the other strengths. This was a raised erythematous area, 1/2 in. in diameter, beginning in 18 hours, reaching a maximum in two days, desquamating on the surface, and finally fading in about 10 days. Scratch tests with the same dilutions were all negative. On Oct. 13 0.5 g. of sulphanilamide was given, with an immediate exudative reaction on both areas, together with a papular dermatitis on the face, arms, trunk, and other leg. The patient recalled that a similar eruption had appeared for a few days when he was having his leg dressed with sulphanilamide. On Oct. 19 and 24, respectively, weeping reactions were obtained in both areas, but not on other parts, from oral doses of 0.5 g. of sulphapyridine and 1 g. of sulphaguanidine. On Oct. 31 0.5 g. of sulphathiazole was followed by irritation but no exudation, and on Nov. 4 a total of 5 g. in divided doses caused a definite recurrence of exudation.

Case VII

The case of Leading Aircraftman C., aged 25, was one of pre-existing eczema which developed an intercurrent hypersensitivity to sulphonamides. Between the ages of 5 and 7 he had suffered from intermittent eczema of the face and hands. There was a family history of asthma and a personal history of nervousness and dyspepsia. On the way to the Middle East in Aug., 1941, a septic abrasion of the right index finger started a scaly and vesicular eczema of the hand, which steadily spread and had recently begun to involve the left hand. He had sulphanilamide ointments applied at intervals for four months before his admission to hospital on Aug. 29, 1942. He settled down with mild application and fractional doses of irradiation.

On Oct. 6 0.5 g. of sulphanilamide was given. An exacerbation took place on both hands, and in addition a papular dermatitis appeared on the right forearm. Intradermal and scratch tests and the application of sulphanilamide paste were all negative. Successively larger doses of sulphapyridine and sulphaguanidine were then given from Oct. 17 to 29. Papular reactions were obtained on the right forearm with 3 g. of sulphapyridine and 40 g. of sulphaguanidine in divided doses.

Case VIII

Sapper H., aged 42, began in July, 1942, to suffer from boils in both axillae. Sulphanilamide powder was applied, between other treatments, at intervals over the next three months. At the beginning of October an eruption appeared in both axillae and became progressively worse. A week later he began to itch all over, and a milder eruption spread to the trunk and hands.

On admission to hospital on Oct. 16 he showed an acute exudative dermatitis and furunculosis of both axillae, and a papular dermatitis on the hands and scattered over the trunk. The dermatitis rapidly subsided and the boils improved steadily. One application of sulphanilamide paste to the left axilla caused a recurrence of dermatitis in *both* axillae, and a papular eruption when applied to an area on the right arm, which had not erupted before. By Nov. 4 both axillae were clear, and 0.5 g. of sulphanilamide was given by mouth. Next day he was covered with an irritable papular dermatitis of a photosensitive nature, being confluent on the face, neck, and trunk above the waist, moderate on the knees, mild on the lower trunk and legs, and absent from the inner surfaces of the upper arms. Both axillae were again the sites of a weeping dermatitis.

An intradermal test with 1% sulphanilamide was negative.

Case IX

About the beginning of Aug., 1942, Lieutenant P., aged 30, was wounded in the right hand and left knee. These were dressed, and he remained with his unit. Sulphanilamide powder was used. The wounds failed to heal, and about the beginning of September his knee underwent secondary infection, with inguinal adenitis and fever. On Sept. 5 he was sent to hospital, where he was treated at first with sulphanilamide locally, and afterwards, as there was no improvement, with other applications. He was almost healed on his discharge 6 weeks later. He was transferred to a convalescent home, where sulphanilamide powder was again applied, and in a few hours both areas were weeping profusely.

I saw him for the first time on the following day, Oct. 24, when he had areas of exudative dermatitis about 3 in. in diameter on the right hand and left knee. There was no adenitis or secondary infection. Dressings of Lassar's paste were applied and he was instructed to avoid sulphonamides locally and by mouth. By Nov. 2 the lesions had cleared, and he was given 0.5 g. of sulphanilamide by mouth. A few hours later a general eruption appeared. When next seen on Nov. 4 he showed an acute papulo-vesicular dermatitis, intensely irritable, and universally distributed from head to feet.

Case X

In June, 1942, Captain B., aged 30, was wounded in the right arm. The wound suppurated and caused some surrounding pustular dermatitis, which persisted until August, when he was admitted to hospital. He had been treated with sulphanilamide powder locally at intervals during this time. About Oct. 8 he developed a small septic sore on the lobe of the right ear. Two days later similar sores appeared on the left leg, and after a further 24 hours these had progressed to a cellulitis, for which he was evacuated from the field. At the field ambulance he was noted to have bullae on the left shin, with surrounding cellulitis and a temperature of 100°. Sulphanilamide was started on Oct. 11: 2 g. followed by 1 g. 4-hourly. On Oct. 12 the bullae were larger and the oedema more extensive, with inguinal adenitis and oedema of the right ear, and a temperature of 101.3°. On the same day an eruption began on his hands and face.

On reaching hospital on the 13th he showed cellulitis of both ears and legs, bullae on the left leg, and a vesicular and pustular dermatitis of the hands, face, and the area of his original wound of the right forearm. Sulphanilamide was stopped on Oct. 13. By Oct. 21 his skin was clear except for an infected ulcer on the left leg where the bullae had been. This slowly healed. He gave no reaction to the local application of sulphanilamide to any areas. Sulphathiazole 6 g. and sulphaguanidine 16 g. in divided doses gave no reactions. On Nov. 5 0.5 g. of sulphanilamide was given, to be followed by an irritable erythematous dermatitis of both legs below the knees and the skin on the right forearm at the site of his original wound.

This condition was considered to be a streptococcal infection, plus a reaction to oral sulphanilamide, to which he had been sensitized by local applications two months previously.

Case XI

Corporal C., aged 26, had suffered from a mild eczema of the feet, hands, and trunk for two years, which had been almost quiescent over the past two months. On Oct. 13, 1942, a spot resembling impetigo had appeared on the scrotum. It was treated with iodine. On Oct. 15 sulphanilamide and fomentations were applied three times. On Oct. 16 he was given 2-g., 1-g., and 1-g. doses of sulphanilamide by mouth. On the 17th a generalized irritable rash appeared.

He reached hospital on the 20th, showing a small area of weeping dermatitis on the right side of the scrotum, and a widespread papular dermatitis of the trunk and limbs. An intradermal test with 1% sulphanilamide caused an irritable area of raised erythema, 4 to 5 in. in diameter, lasting three days Sulphanilamide paste applied on Oct. 31 caused no reactions. On Nov. 1 he took 0.5 g. of sulphanilamide orally. An immediate generalized eruption appeared, of a photosensitive type. It consisted of irritable papules, becoming confluent on the upper trunk, with a sharp lower margin at the waistline. It was also present on the face, arms, and legs, especially the exposed parts of the knees, but was absent from the axillae and the trunk below the waist.

Case XII

Lance-corporal H., aged 32, was operated on for hammer-toe on Sept. 17, 1942. His wound healed slowly, and sulphanilamide powder was applied intermittently to it over the next month. A mild degree of sepsis supervened, and at 10 a.m. on Oct. 21 he was given an initial dose of 2 g. of sulphanilamide, followed by 1 g. 4-hourly until 2 p.m. the next day—a total dose of 8 g. Two hours after the first dose he developed macules on his hands and feet. About 8 o'clock that evening he had a rigor and his temperature rose to 102°. Macules were then seen on his face and neck. His temperature continued between 102° and 104°, with a pulse rate of 100 to 120.

Seen on Oct. 24, he showed a morbilliform erythema, universally distributed, but confluent on certain of the exposed parts—face, neck, necklace area, and dorsum of the hands. It was scanty on the lower trunk and in the axillae—parts seldom exposed to the light. It was not irritable. Malaise was the only symptom, and there were no signs of measles or other exanthemata. The temperature fell by crisis on Oct. 25, and the rash had faded two days after that, except for a mild exfoliation on the face, neck, hands, and feet. There was a little secondary pustulation on the hands.

Discussion

All these cases show a cutaneous hypersensitivity to sulphonamides, apparently induced by their local application. When this sensitization has taken place dermatitis can be caused by the local application of sulphanilamide, and by the internal administration not only of sulphanilamide itself but of other drugs of the sulphonamide series. The reaction is proportional to the dose of the drug and to the degree of sensitivity (which varies considerably). In the same patient a large dose will cause a severe eruption, a moderate dose a mild one, and a small dose no eruption at all.

Three of the above cases were ones in which hypersensitivity could be expected, two being pre-existing eczemas and the other a seborrhoeic subject with an axillary intertrigo. All the remaining cases were pyogenic skin infections of one kind or another. No cases were seen as a result of dressing *clean* wounds or burns with sulphanilamide. After a varying period of treatment patches of dermatitis appeared in the areas treated and steadily spread. In some of the cases there has finally been a rapid extension of the sensitivity to other parts, causing a widespread acute dermatitis.

The reaction to oral administration is the most sensitive. All of the above cases have flared up on giving sulphanilamide by mouth, usually with as little as one 0.5-g. tablet. Four out of six cases tested gave a reaction to sulphapyridine, but in rather larger doses. Four out of six reacted to sulphaguanidine in still larger doses. One case reacted only to sulphathiazole, but owing to shortage of this drug at the time it was not possible to test all patients with full doses. The reaction usually begins about 8 hours after administration. In 3 cases it has shown a typical photosensitive distribution, and in one case it has been accompanied by drug fever.

Sensitivity to local application is less marked. Of the 12 cases 6 reacted to it in the eczematous area where the original sensitizing applications were made. Other parts of the skin are much less sensitive. Even those areas which became inflamed on oral administration of the drug reacted to its contact in only one case. Patch tests on unaffected areas of skin, therefore, would not be of any diagnostic value in this condition.

Intradermal tests were positive to a 1% solution in 4 out of 10 cases tested. In a series of 10 control subjects they were negative in all cases. A positive reaction appears in anything from 4 to 24 hours, and lasts from 24 hours to a week. It consists of a raised area of dull erythema, and may itch considerably. Scratch tests gave no positive reactions.

It is not known how long this sensitivity persists. None of these cases has been under observation long enough for it to pass off, and no diminution has been observed in the degree of sensitivity with the passage of time. The cases have reacted for periods of up to two or three months after local sulphonamide therapy has been stopped.

In Case III, one of the most sensitive, an attempt was made to transfer the hypersensitivity by the Prausnitz-Küstner technique. Serum from the patient was injected intradermally into the arm of a normal subject (my own). A scratch test was performed 48 hours later on this site, with no reaction. Nor was there any reaction to the ingestion of sulphanilamide tablets by the subject.

Although hypersensitivity to many substances used locally on the skin may occur, its existence with sulphonamides is a more serious matter. It is easily seen that should these men get pneumonia, cerebrospinal meningitis, bacillary dysentery, or any of a large number of other diseases, their treatment with sulphonamides would be gravely hampered, if not rendered impossible. These cases present a strong argument against the indiscriminate use of sulphonamides as applications for skin infection or dressings for wounds. Other materials will usually do the job equally well, if perhaps not quite as quickly. It should be added that this does not apply to the introduction of sulphonamides into the depths of wounds, since in all cutaneous sensitizations it is necessary to have actual contact with the skin itself.

Most of the above cases have had sulphonamides applied for prolonged periods, and in Case VI an area of skin treated for only a few days escaped sensitization, in contrast to those treated for several weeks. This indicates that when these drugs are used it should be for as short a time as possible. Such a principle should not prove any hindrance in practice, since an infection susceptible to sulphonamides will be eradicated in a few days if it is going to be eradicated at all.

Summary

Twelve cases are described in which local sulphonamide therapy has caused sensitization dermatitis.

This is a serious drawback in the treatment of subsequent infections for which sulphonamides are really needed—e.g., pneumonia.

The fact that these 12 cases were seen in this hospital over a period of less than three months suggests that the condition

is by no means a rare one. It is to be suspected whenever eczematization occurs in skin lesions receiving local treatment with sulphonamides.

Intradermal and patch tests are of little value in diagnosis, which is best confirmed by the reaction which follows a small dose of sulphanilamide by mouth.

My thanks are due to Major B. C. Tate, R.A.M.C., who first drew my attention to the existence of this condition, and to the Director of Medical Services, N.Z.E.F., for permission to publish this paper.

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THE MODERN TREATMENT OF GONORRHOEA

BY

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The following article has been written in response to a request from the Editor, who recently received a letter from a surgeon saying he was "appalled by the way patients are being mistreated in general practice." I have therefore set out the treatment somewhat dogmatically, because my remarks are meant not for the venereologist but for the general practitioner, who may be none too familiar with either gonorrhoea or its treatment.

GONORRHOEA IN THE MALE

The incubation period is of some importance; a gonorrhoeal discharge usually starts 3 to 5 days after infection, with extremes of 2 to 10 days; do not believe the patient who says he has not indulged in sexual intercourse for several weeks or even months—he is either a liar or suffering from a relapse. It is said that non-gonococcal urethritis—and this is a very definite entity—has a rather longer incubation period: often a week or 10 days or more. Don't forget the possibility of an intra-urethral syphilitic chancre causing a discharge, in which case the incubation period is likely to be not less than 3 weeks.

Diagnosis

In a typical case there is a profuse greenish-yellow purulent discharge from the urethral canal; make sure that it does come from within the urethra and not, as in balanitis, from behind a tight foreskin. A thin watery discharge usually indicates chronic gonorrhoea or non-specific urethritis.

1. Take a loopful of the pus from within the meatus with a platinum loop and spread it thinly and evenly on a slide—or preferably two slides—and allow to dry in the air. Do not rub the slide over the tip of the glans penis. Stain by Jensen's modification of Gram's method—gonococci appear as Gram-negative intracellular diplococci. If there is likely to be any question of legal proceedings it is a wise plan to have the discharge cultured as well, in which case it is better to refer the patient to a pathologist before starting treatment.

2. Take a specimen of urine into two or more glasses; if the infection is recent, that in the first glass will be hazy owing to pus, and that in the second clear (anterior urethritis). If both glasses are hazy there is posterior urethritis as well. Add half an ounce or so of acetic acid to the urine in each glass: if the haze is due to pus it will not disappear; if due to phosphates it will clear.

If gonococci are found treatment may be begun; if they are not found take further specimens (smear and culture) next day, having told the patient to hold his urine all night or at least 4 hours before coming to see you. If gonococci are still not found refer the case to a specialist. You may get into deep water if you undertake chemotherapy without having made a definite diagnosis.

Only in *urgent* cases in which the diagnosis is clinically probable may chemotherapy be started pending the result of microscopical examination.

Treatment

The general practitioner should be chary of undertaking the treatment of gonorrhoea unless he has had considerable experience not only of the disease but of chemotherapy: gonorrhoea cases have a way of "going wrong," and the sulphonamide drugs are dangerous in unskilled hands. Many practitioners do not care to treat these cases, and there are plenty of venereologists and V.D. clinics available in most parts of the country. Remember, the average venereal patient is not a satisfactory one: if you cure him he shows little gratitude; if you fail he is apt to turn nasty.

However, if you do decide to undertake treatment start on the following lines. Don't forget the importance of general as distinct from specific treatment. During the acute stage the patient should lead a quiet, peaceful, sedentary life, keep his bowels well open with cascara or liquid paraffin, and avoid sexual intercourse, alcoholic and other stimulants, and pornographic literature. No special diet is necessary. Above all things he should avoid introspection: many of these patients take far too much interest in their disease and its treatment. This applies more particularly to those cases which do not react well to specific drugs. All patients should be warned of the contagiousness of their condition and of the necessity for simple hygienic measures to avoid infecting their own eyes or communal articles such as towels, baths, etc. While it is true that *adults do not get gonorrhoea from such things as lavatory seats,* nevertheless young female children are particularly susceptible to infection, and simple hygiene is desirable on aesthetic grounds alone.

Chemotherapy

Before starting this exclude previous intolerance and other contraindications such as certain dermatoses, blood dyscrasias, renal disease, jaundice, and neuritis, and ask the patient if he has already taken any sulphonamide. Remember that the sulphonamides may cause vertigo: do not allow a patient to drive a car or pilot an aircraft while taking these drugs. Under optimum conditions from 80 to 90% of early acute cases will be cured by the best of the sulphonamide preparations without any other treatment. Those recommended are sulphadiazine, sulphathiazole (thiazamide, M & B 760), sulphapyridine (M & B 693), and sulphanilamide, in that order of merit; the first-named is often unobtainable, and sulphathiazole is therefore the usual choice. Prescribe 5 g. (10 tablets) a day for 2 days—3 tablets on rising, 2 at midday, 2 at tea-time, and 3 at bedtime; the tablets should be given crushed; two tumblerfuls of water or other bland fluid to be taken on each occasion. It is of the utmost importance that the fluid intake should be *at least 6 to 7 pints* in the 24 hours in order to avoid the risk of haematuria, which may be a very serious complication of treatment. If the patient shows a dramatic improvement at the end of 48 hours no further chemotherapy may be needed; if, however, there is still some discharge, or the urine is still hazy with pus, continue chemotherapy on the same dosage for a further 2 days; total—20 g. of sulphathiazole in 4 days. Then *stop* the drug. Insist on seeing the patient daily, preferably early in the morning, and do not give a prescription for, or supply, sufficient of the drug for more than one day: sulphonamide preparations cannot be obtained by the patient from a chemist without a prescription. The sulphonamide preparations appear to act best and to be less apt to cause haematuria or anuria when the urine is rendered alkaline; therefore prescribe the following from the start of the treatment:

Pot. cit. (or sod. cit.)	..	..	gr. xxx
Pot. bicarb. (or sod. bicarb.)	..	..	gr. xx
Chloroform water	..	..	ad ℥ss

Sig.—One tablespoonful to be taken 4 times a day.

If the discharge clears in 2 to 4 days watch the patient daily for 7 days after the termination of chemotherapy, noting whether there is any discharge or heavy threads in the urine; if both are absent at the end of this period a presumptive cure has been obtained. If after 4 days' chemotherapy minor signs of urethritis persist, put the patient on to antero-posterior irrigations (into the bladder) of 1 in 10,000 potassium permanganate or 1 in 8,000 oxycyanide of mercury. (Before using the latter drug make sure the patient is not taking iodides in any form.) Irrigations should not be carried out by the patient himself but by someone skilled in the procedure. The lotion should be at blood heat, given with an irrigator, raised not more than 2½ feet above the patient's penis, and a nozzle of the Janet type; the anterior urethra should first be cleansed, and the

solution then coaxed, not forced, into the bladder. Fill and empty the bladder two or three times, using 2 pints of the antiseptic lotion. Do not in any circumstances use a syringe for urethral treatment: syringing is an inefficient method, and serious consequences may result. If 7 days' irrigation fails to complete the cure you may give a second course of sulphonamide drug, but first have a total and differential white blood count done to avoid the risk of agranulocytosis; preferably use a different preparation—e.g., sulphadiazine, 6 g. a day for 4 days, or sulphapyridine, 5 g. a day for 4 days. If this second course of chemotherapy fails you may assume that the patient is sulphonamide-resistant, and further chemotherapy is not only useless but even dangerous.

Cases which resist chemotherapy and irrigation are most likely to be troublesome—look out for complications, especially epididymitis and prostatitis. The most efficient treatment for sulphonamide-resistant cases is artificially induced hyperpyrexia; this is a dangerous procedure unless carried out by an expert. The most effective method of raising the patient's temperature is the heat cabinet—e.g., the Kettering hypertherm or the inductotherm—but as these cabinets are rarely available, recourse is usually had to simpler methods, such as intravenous or intramuscular injections of various forms of protein—e.g., typhoid or *coli* vaccine, sterile milk, peptone, or one of the various proprietary preparations.

If the patient is not cured after two courses of chemotherapy and irrigation refer him to a specialist; the same applies to those cases which show intolerance of the sulphonamides.

Intolerance to Sulphonamides

The following are the commoner side-effects of sulphonamides, with recommendations concerning them.

Side-effect	*Recommendation*
Headache, lassitude, disorientation, diplopia, insomnia	Unless severe, maintain dosage. Keep patient in bed
Pyrexia (above 100° F.) ..	Reduce dosage; force fluids; stop drug if temperature persists
Nausea, vomiting, epigastric discomfort, diarrhoea	If mild, maintain dosage but give a diet of slops and alkaline gastric sedatives. If more severe, reduce dosage or stop altogether
Conjunctivitis (sulphathiazole)	Imperative to stop drug and force fluids
Cyanosis	Exclude sulphur-containing foods and drugs. Do not stop drug unless severe. Give methylene blue 0.5 to 1 g. a day by mouth
Haematuria	Discontinue drug; force fluids. If oliguria or anuria develops call in a G.U. surgeon: ureteral catheterization or nephrostomy may be indicated
Dermatitis	Avoidance of exposure to the sun assists in prevention. Discontinue drug. Induce diuresis; check leucocyte count
Agranulocytosis	May be ushered in by sore throat, headache, and fever; do blood count. Pentnucleotide 0.35 g. intramuscularly twice daily. Transfuse with fresh defibrinated blood
Haemolytic anaemia ..	Omit drug, induce diuresis, transfuse
Jaundice, toxic hepatitis, acute yellow atrophy	Imperative to discontinue drug

Summary.—In dermatitis (rash) and fever it is wise to stop the drug and force fluids. In conjunctivitis, acute haemolytic anaemia, haematuria, severe leucopenia, hepatitis, and jaundice it is *imperative* to do so. Remember that persons who have shown themselves susceptible in the past will almost certainly do so again. Therefore always question the patient as to previous idiosyncrasy before prescribing sulphonamide drugs.

Complications

These usually call for specialized treatment unless they react to the sulphonamides, and therefore will only be mentioned briefly.

Infection of Tyson's glands, situated on each side of the fraenum, *and of the para-urethral ducts,* situated beside the meatal opening, is not uncommon; it usually clears up under chemotherapy. If not, it may have to be dealt with by electrocautery or surgically.

Folliculitis (inflammation of Littré's glands), infiltrates, and peri-urethral abscess usually occur somewhat late and in maltreated cases, and may call for the use of Kollmann's dilator or intra-urethroscopic treatment such as cauterization or incision.

Posterior urethritis probably occurs in a large proportion of those cases which are not treated in the early stages. It usually presents no special symptom; when it does, frequency, strangury, or even retention of urine may occur. Treatment consists of hot baths and suppositories of morphine, gr. 1/4, and atropine, gr. 1/70, one each night for a few nights; rarely it may be necessary to pass a soft rubber catheter to relieve retention, but this should be done only as a last resort and with the strictest aseptic precautions.

Epididymitis occurs in about 5% of cases, and can usually be avoided if the patient leads a sedentary life during the acute stage and wears a jock-strap or sports slip. It may be caused by external violence such as a blow, too strenuous exercise, unskilled instrumentation, or over-forcible irrigation. In the acute stage the patient should lie up, the testicles should be supported with cotton-wool and bandage, and ice-packs or glycerin of belladonna or kaolin poultices applied. It usually clears up rapidly under chemotherapy; if it does not, puncture with an intramuscular needle often relieves the acute pain. Irrigation, if being given, should be stopped during the acute stage. Epididymitis is usually preceded by prostatitis and vesiculitis, and these should be dealt with when the condition has subsided. The vas deferens on the affected side is usually permanently blocked, so that if the condition is bilateral the patient is likely to be permanently sterile.

Prostato-vesiculitis.—This probably occurs in all cases of posterior urethritis and almost always precedes an epididymitis or arthritis. If acute it usually resolves under chemotherapy, but if it persists sedative treatment by means of hot sitz baths and morphine-and-atropine suppositories is indicated. A prostatic abscess generally bursts into the urethra, but may require surgical incision. In the chronic stage, when the only evidence is pus and perhaps gonococci in the secretions, regular gentle massage every 5 to 7 days and diathermy are indicated.

Arthritis and *tenosynovitis* usually attack one or two of the larger joints or the tendons around them—e.g., knee, ankle, shoulder, wrist; arthritis may also affect several of the smaller joints, such as those of the hands and feet. Treatment should be directed to the original focus—nearly always the prostate and vesiculae seminales; artificial hyperpyrexia is very successful in early cases.

Cowperitis, keratodermia blennorrhagica, septicaemia, and *endocarditis* occur very rarely and call for the services of an expert.

Ophthalmia is rare in adults, and usually reacts very rapidly (within 24 hours) to chemotherapy. Protect the sound eye; instil atropine drops into the affected one and bathe frequently with boric lotion or sterile normal saline. Since ophthalmia may lead to permanent blindness it is wise to call in a specialist.

Test of Cure

If the patient has reacted well to chemotherapy, with or without irrigation, and if presumptive cure has been obtained by one or two courses of the drug within a week of discontinuing treatment, he should be re-examined once weekly for 3 weeks in order that any tendency to relapse may be detected, and then finally at the end of 3 months. *No lower standard of cure is permissible.* At the 3 preliminary weekly tests of cure the urethra should be examined for any discharge and the urine for heavy threads—i.e., those which sink within a minute. It is best to see the patient early in the morning after he has held his water all night. The presence of gonoccocci or numerous pus cells indicates incomplete cure.

Final Test of Cure

(*a*) Look for any discharge.

(*b*) Examine all-night specimen of urine in two or more glasses, telling the patient to retain some urine in his bladder. Make smears and cultures from any discharge or threads.

(*c*) Massage prostate and seminal vesicles firmly but gently with the patient in the knee-elbow position; expressed fluid should appear at the meatus. If it does not, tell the patient to pass the remainder of his urine: centrifuge this; make smears and cultures. Note condition of Cowper's glands before removing finger from rectum.

(*d*) Wash out urethra and bladder with oxycyanide of mercury lotion 1 in 8,000, leaving some in the bladder.

(*e*) Examine anterior urethra with the urethroscope for follicles, infiltrates, stricture, etc.

(*f*) Pass the largest curved sound which will traverse the meatus (say 22–26 Clutton) into the bladder.

(*g*) Tell patient to empty bladder.

(*h*) Take a specimen of blood for Wassermann, Kahn, or other serum test to exclude syphilis; have a gonococcal complement-fixation test done if the patient has been resistant to treatment or has suffered from complications.

If the patient passes all these tests satisfactorily he may be dismissed as cured.

Relapse

About 5% of all cases may be expected to relapse, and this is much more apt to occur in those cases which have reacted

poorly to chemotherapy. Treatment of a relapse is similar to that of the original attack, but tests of cure should be even more meticulous.

Summary of Treatment

1. Make sure of the diagnosis.

2. Before starting chemotherapy inquire for history of previous intolerance. No special diet is necessary.

3. Give sulphathiazole, 5 g. a day for 2 to 4 days, in evenly spaced doses; the drug need not be taken during the night. Give concurrent alkaline mixture and plenty of fluids. In place of sulphathiazole the following may be used: sulphadiazine, 6 g. a day for 4 days; sulphapyridine, 5 g. a day for 5 days; or sulphanilamide, 5 g. a day for 5 days. *Never give a sulphonamide preparation for more than 7 consecutive days in any circumstances.*

4. Look out for toxic effects of sulphonamides.

5. Look out for complications.

6. Always do a blood count before a second course of a sulphonamide.

7. Make certain that tests of cure are meticulously carried out: you cannot be sure the patient is cured unless you do. If he is not, he may unwittingly infect some innocent person.

Warnings

Cases are divided into two classes—those which are cured by sulphonamides and those which are not. Refer the latter to a specialist. You may regret it if you don't.

Don't give more or less of the sulphonamide than the dosage indicated above. If you overtreat, serious reactions which may endanger the life of the patient may occur. If you undertreat you may make the patient sulphonamide-resistant: he may then take months to cure.

Don't attempt procedures with which you are not familiar—e.g., irrigation, instrumentation, prostatic massage.

Don't use a syringe for intra-urethral treatment, and don't use provocative instillations for test of cure.

Gonorrhoea is a serious disease, and sulphonamides are dangerous drugs, not to be prescribed lightly.

The average V.D. patient is an unsatisfactory one; he is usually a liar. Tread very warily, especially as regards prognosis.

Appendix: Technique of Irrigation

Tell the patient to pass water.

Cleanse the glans penis with a little of the lotion to be used.

Use an irrigating vessel, preferably of glass, connected by six feet of rubber tubing to a *blunt*-pointed glass nozzle (Janet type).

Pour two pints of the lotion at 100° F. into the container and expel air from tube and nozzle. Clip the tubing.

Adjust the height of the irrigating vessel not more than 2½ feet above the patient's penis.

Patient should stand, or lie on an examination table.

Insert nozzle into the meatus, release the clip, and allow lotion to fill the anterior urethra. Repeat three or four times, allowing the urethra to empty after each filling.

Insert nozzle and tell patient to relax, take deep breaths, and try to pass water. In this way lotion may be coaxed into the bladder. *Don't force it.*

Repeat this procedure two or three times.

GONORRHOEA IN THE FEMALE

Treatment of this is carried out on similar lines to that in the male. Chemotherapy in proportionate dosage, making allowance for weight, is usually successful provided there are no closed foci—e.g., bartholinitis. Douching is to be deprecated; dry swabbing or swabbing with weak alkali is usually preferable. Skenitis, bartholinitis, cervicitis, and salpingitis should be dealt with as they occur, preferably by a specialist. Tests of cure should be carried out immediately after the menstrual period for 3 consecutive months following termination of treatment. They should include both microscopical and bacteriological examination of all pathological specimens and, of course, blood tests.

Medical Memoranda

Intestinal Obstruction after Caesarean Section for Contracted Pelvis

Cases of intestinal obstruction after Caesarean section reported up to 1938 are not numerous. O'Connor (1934) had one death from intestinal obstruction in 436 cases of Caesarean section, the patient dying on the sixth day. No suggestion was made as to the aetiology, except perhaps toxaemia. Haultain *et al.* (1933–4) found that irregular action of the bowels was present in 24 patients (14.1%). The lax post-partum abdominal musculature, arising *de novo*, was the only aetiological agent suggested. Montgomery (1936) considered peritoneal adhesions a possible cause of intestinal obstruction after Caesarean delivery, but he does not mention the possibility of pelvic impaction of the uterus. Quigley (1937) reported three cases of intestinal obstruction in a total of 358 Caesarean sections simply as "ileus," with one case—"Intestinal Obstruction: Operation."

The following two cases, treated shortly after each other in 1930–1, aroused my interest at the time. Search of the literature, however, failed to disclose reports of any similar case, although some must surely have occurred. Both women were primiparae under 30. Gestation had been normal so far as was known; there was no evidence of toxaemia and no history of renal disease. In neither had there been any previous laparotomy, and no abnormality in the serous layers was observed at operation. Both were unbooked cases, admitted with obstructed labour.

CASE I

A. B., aged 19. Admitted to hospital on July 26, 1930, five hours in labour. No descent; Müller's test showed marked overlap of the anterior symphysial border; P.V., sacral promontory readily felt. Classical Caesarean section was performed the same day under chloroform–open ether. A 7½-lb. full-term living male child was delivered. Closure was carried out in layers without drainage. Convalescence was uneventful, but there had been no bowel action by the third day. The patient then began to complain of distension and colic. The next morning she looked toxic and dehydrated, and had started vomiting. On rectal examination a large smooth rounded mass was felt, firmly fixed in and filling the true pelvis. It was concluded that this was the involuting uterus, which had become retroverted and impacted in the pelvis. It was therefore decided to reopen the abdomen.

On reopening through the original incision the uterus was found firmly impacted in the pelvis, and the pelvic colon in the region of the pelvic-rectal junction was very congested and flattened. It was decided to perform a colostomy. A Paul's tube was inserted into the transverse colon. *The uterus was then fixed with a catgut suture to the anterior abdominal wall.* The obstructive symptoms passed off and the colostomy was closed four weeks later.

It may be said that at the time of the Caesarean section there had been no evidence of sacculation of the uterus, indicative of a retroversion earlier in the pregnancy.

CASE II

C. D., aged 26. Admitted to hospital on June 9, 1931. 6½ hours in labour, which was obstructed, as in Case I, with gross pelvic contraction. The anaesthetic and the procedure were as in Case I. An 8-lb. full-term living male child was delivered.

In this patient convalescence was from the first somewhat stormy. There were early symptoms of chest complications, but, on the other hand, in the first day or two flatus was freely passed, and no distension was observed. On the third day, however, she vomited. Vomiting continued, and she became greatly dehydrated. The usual measures were adopted without improvement. A rectal examination on the morning of June 13 again revealed a large mass impacted in the pelvis. By this time, however, the patient was very toxic, and, furthermore, the chest condition had developed in a manner strongly suggesting embolic phenomena. Operation being unfortunately not feasible, the patient died the next day. No necropsy was allowed, but that the mass felt was the post-partum uterus I have no doubt.

The close resemblance between this and the preceding case struck me forcibly at the time, and I felt that prophylactic ventrifixation, as employed in the first case, would have prevented the post-partum uterus falling into the contracted pelvis and obstructing the colon. I have adopted the practice of ventrifixation after Caesarean delivery in all cases since then, and no symptoms of obstruction have occurred in any of them.

DISCUSSION

In both cases Caesarean section was performed for *marked pelvic contraction.* Even if a post-partum uterus were to become retroverted and fall into a *normal pelvis* there would be sufficient clearance to prevent its becoming impacted there. In the Caesarean operation the uterus is firmly compressed manually. Perhaps, in so doing, it is made small enough to fall into the *contracted* true pelvis, given that the latter is grossly contracted.

Whatever is the precise pathology, I am convinced that in both these cases the cause of the obstruction was the physical

mass of the retroverted post-partum uterus impacted in the (*contracted*) true pelvis.

OBSERVATIONS

Impaction of the retroverted post-partum uterus in the contracted true pelvis has never, so far as I have been able to determine, been quoted as a cause of intestinal obstruction after Caesarean delivery.

Having seen it occur twice, it has seemed wise and logical to perform prophylactic temporary ventrifixation in all my subsequent cases of Caesarean section. Since adopting this practice I have seen no suggestion of obstructive symptoms in any of these cases of Caesarean section, some 20 in number. It would be absurd, however, to argue from two or twenty cases.

The mechanical obstruction I have described may be operative in a proportion of cases hitherto diagnosed as post-operative "ileus." Spontaneous remission would of course be expected in most cases, as the uterus involuted.

I am much indebted to Mr. T. J. Shields, the B.M.A. librarian, for supplying the references to this paper.

W. HILTON PARRY, *M.C.*, M.B., Ch.B.

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Pediculosis Capitis and Corneal Lesions

The object of this memorandum is to draw attention to the frequency of severe corneal lesions associated with pediculosis capitis. It is a summary of observations made on 25 patients admitted to hospital for corneal lesions. I have been unable to trace any similar condition mentioned in the literature available to me, and I should be interested to know whether this observation has been made elsewhere.

It is, I think, a matter of common experience in wartime to find an increasing number of out-patients infected with lice. These observations were made in the out-patient department of the Infirmary during the last six months, with an average 200 patients a day. These infected patients, who came to us for eye consultation, were mostly young children, well fed, without apparent signs of general debility. The presence of lice, which were invariably *Pediculus capitis*, was discovered by chance on examination or later in the wards after admission. We could never find any phthiriasis palpebrarum, and the cilia were always unaffected. Apart from the conjunctivitis which was always present, the majority of cases had corneal ulcers (14 cases), 8 cases marginal keratitis, 1 case hypopyon ulcer, and 2 cases severe conjunctivitis without corneal lesion. The age incidence was as follows: 20 patients under 10 years and 5 patients over 10 years. The oldest patient was a woman aged 30. The Wassermann reaction was negative in all but one case.

The patients usually complained of burning pain of short duration in one eye, which gradually became worse and was accompanied by photophobia. The lesion was always unilateral. A severe conjunctivitis with some muco-purulent discharge was invariably present. Bacteriological examination of the conjunctival sac showed nothing characteristic; diphtheroid bacilli, streptococci, and staphylococci were present in some cases.

The corneal ulcers had no special features; they were central or paracentral infiltrations in the substantia propria with loss of epithelium. The marginal keratitis consisted of multiple subepithelial infiltrations with a quick tendency to break down and to form confluent paramarginal crescentic ulcers. In some cases they were confined to one side of the cornea only; in other cases they tended to spread all round the corneal margin, thus forming a more or less complete ring of infiltration. Slit-lamp examination showed infiltration of the anterior part of the substantia propria. Iris irritation was often present, but no K.P. or posterior synechiae were ever observed. Although this condition is very similar to the metastatic marginal ulcer of Fuchs, it showed but little tendency to respond to the routine treatment. In fact, it took a long time to heal, during which period the eye remained very congested.

The routine treatment was a sassafras cap for the head, carbolization of the ulcer, atropine 1%, argyrol 10%, sulphapyridine or uleron tablets, and protein shock (milk injections).

It seems probable that lice infestation causes not only conjunctival irritation but lowers the vitality of the cornea, resulting in severe corneal infiltration with little tendency to heal.

My thanks are due to the honorary surgeons of the Wolverhampton and Midland Counties Eye Infirmary—Mr. G. F. Haycraft and Mr. H. Campbell Orr—and the assistant surgeon, Mr. A. W. Green, for permission to publish this memorandum.

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Reviews

THE CAMPAIGN AGAINST TUBERCULOSIS

The Modern Attack on Tuberculosis. By Henry D. Chadwick, M.D., and Alton S. Pope, M.D. (Pp. 95. 6s.) New York: The Commonwealth Fund; London: Oxford University Press. 1942.

Drs. Chadwick and Pope detect in most works on tuberculosis a singular tendency to look on the disease as an isolated problem rather than as one of the communicable diseases in its total social and economic background. Since enough knowledge is already available to make the eradication of tuberculosis possible within a few generations if the established techniques are effectively applied, they have set out to provide "a concise digest of the experience of many workers and of present-day practices in a form serviceable to the health officer and administrator." The attempt has been wholly successful, and we strongly recommend this little book to readers even in this country, and not only to medical officers of health but to tuberculosis officers and medical superintendents of sanatoria, who will find among its contents sound principles and common-sense conclusions that will act as salutary correctives to preconceived notions or those that are merely the fashion of the moment.

In the U.S.A. sanatorium beds have increased from 9,000 to 90,000 in 40 years. Tuberculosis in dairy cattle has been almost eliminated, and pasteurization is widespread. But, unfortunately, as in this country, little progress has been made in finding cases of early tuberculosis. In naming the essentials of a programme for the eradication of the disease, the authors therefore put first "a medical profession interested in the problem and familiar with modern methods of diagnosis and treatment." And they stress the importance of a knowledge of certain basic data before embarking on any sound anti-tuberculosis campaign. The various diagnostic procedures are critically examined, and the conclusion at the end of this chapter deserves emphasis: "Prompt diagnosis is important to the patient, to the family, to the community. Every suspected case of tuberculosis should be cleared of suspicion as quickly as possible by being proven innocent or guilty of harbouring the disease. Time-consuming observation by physicians without resort to all the diagnostic aids at our command is to be condemned and rated as a disservice to the patient that borders on malpractice."

The sections on the sanatorium as a means of control and treatment, and on case finding in the community, are no less interesting and no less well balanced. The authors hold that tuberculosis presents one of the hardest administrative problems that confronts the health officer. They emphasize that when an authority fails to provide enough beds it is committed to a plan that is wasteful, ineffective, and in the long run costly. "Half-way measures will not exterminate tuberculosis. A sanatorium bed should be available for every active case of tuberculosis regardless of the stage of the disease. Treatment that will benefit the patient and also serve to shield others by protecting them from infection is the real objective of case finding." And, to quote again from later in the book: "From the standpoint of case finding the shift in the age distribution of tuberculosis mortality means that greater emphasis must be placed on the examination of adult contacts and on mass examinations of groups subject to the highest risks, such as workers in hazardous industries and adults on relief rolls." Patients in ante-natal clinics should be among the first to be considered for mass examination; and a selection of other groups should be based upon actual incidence of significant tuberculosis, as demonstrated by preliminary sampling. The yield of mass examinations will vary directly with the incidence of tuberculosis in the area concerned, and in many parts of the U.S.A. this has already fallen to a point which makes the cost of mass radiography, relative to the number of cases found, prohibitive. From the last chapter, "A Community Campaign of Eradication," we choose one final quotation:

"Too often health officers have taken the "what's-the-use" attitude in regard to tuberculosis. They have been content to make the record a mere bookkeeping chore and let the case rest there. The health officer should look upon tuberculosis as a communicable

disease that calls for his best efforts to assist the physician in obtaining adequate treatment for the patient, and the maximum protection for the public. His responsibility is the same whether the case reported is tuberculosis, diphtheria, or small-pox."

NOTES FOR THE REGIMENTAL M.O.

Notes for the R.M.O. of an Infantry Unit. By C. P. Blacker, M.D., F.R.C.P. Oxford War Manuals. (Pp. 77. 5s.) London: Oxford University Press. 1943.

In this little book Dr. C. P. Blacker crystallizes his experience as medical officer for three years to a battalion of the Coldstream Guards. It is safe to say that nobody employed in a similar appointment can fail to find something useful in Dr. Blacker's notes. Obviously he knows all the ropes; further, in examining each of the many difficult problems involved in regimental medical duties he brings to bear a mental detachment that results in the advocacy of the most simple and the most efficient methods. His advocacy of decentralization—a virtue that is only gradually permeating the Army—is admirable. Not only does its adoption permit the medical officer to devote more time to more essential work but it also increases the efficiency and enthusiasm of those to whom he delegates responsible tasks. Subsequent chapters cover every aspect of a regimental officer's work, including that important part of it so irksome to many—the proper keeping of records and an efficient office routine.

There can be little doubt that Dr. Blacker was in a better position with regard to his unit than a young and newly commissioned medical officer. High professional qualifications, maturer age, and a record of distinguished combatant service in the same regiment during the last war must have given him a standing attainable by few. But those who follow his precepts will surely benefit both themselves and the men under their care. The reader's heart warms to the author because he chose—as was presumably the case—the humble, though most important, role of regimental medical officer, and because he dedicates the book to two sergeants of the battalion "in gratitude for their unfailing help and loyalty."

OXYGEN THERAPY

Manual of Oxygen Therapy Techniques, including Carbon Dioxide, Helium and Water Vapor. By Albert H. Andrews, jun., M.D. (Pp. 191. $1.75 or 11s.) Chicago: The Year Book Publishers, Inc.; London: H. K. Lewis and Co.

This little manual restricts itself to a description of the technique and armamentarium of oxygen therapy. In so doing it becomes a handbook that will be invaluable to both medical and non-medical personnel who have to deal with oxygen therapy apparatus. Cylinders, reducing valves, tents, and masks are all fully described, and detailed descriptions of their use and maintenance are given. There is a most timely chapter on the safety precautions which should be taken whenever oxygen in quantity is used. Instruction in these precautions should now be part of every nurse's training, and much of this chapter might well be reprinted and hung upon every bed where oxygen is being administered. That accidents do not occur frequently is more a gift of chance than the reward of care. Many of the figures concerning the sizes and capacities of cylinders and reducing valves apply to American types, and British data should be substituted by readers in this country. The use of helium–oxygen mixture and of mechanical humidifiers is described; but the more recent types of oxygen "injector" metering devices, developed in this country, are not mentioned. Dr. Andrews's book is well produced, with excellent illustrations, and is a model of clear and concise wording.

Notes on Books

A third edition of *Essentials of Materia Medica, Pharmacology and Therapeutics*, by R. H. MICKS, is published by J. and A. Churchill at 16s. The considerable advances in therapeutics during the last five years have called for large alterations in the content of this manual of pharmacology, which presents in a condensed and easily accessible form the principal requirements of the student and general practitioner. Prof. Micks avowedly deals only with the practical applications of the subject, and in his own words sets out "to teach rather than to expound it." This is unfortunate, because though his book is of value for reference, the student coming to the subject for the first time will not find it easy reading. It is a pity that such an artificial distinction is drawn between sulphanilamide and the other sulphonamides; it would seem more reasonable to classify these drugs from the start according to their bacteriological activity. But these and other minor points depend more or less on personal preferences, and the book as a whole bears the imprint of a practical human experience with materia medica which makes it a useful accessory both to the student and in the consulting-room.

As Dr. J. J. CONYBEARE truly says in the preface to the sixth edition of his *Textbook of Medicine* (E. and S. Livingstone), one of the greatest problems before the editor of a work with numerous contributors is to prevent a progressive increase in the size of the book. With loyal co-operation all round the number of pages is practically the same as in the fifth edition, though under wartime conditions the price has had to be raised to 28s. The sections on tropical diseases and on vitamins and deficiency diseases have been completely rewritten. The same may almost be said of the sections on tuberculosis and on diseases of the respiratory system, to which is now added a chapter on the treatment of wounds of the chest. Other sections which have grown are those on polyneuritis, on common skin diseases, and on matters relating to blood transfusion. Dr. Conybeare's textbook in its latest version will make many new friends among final-year students and practitioners.

A new edition of *Aids to Surgical Anatomy* has been prepared by Mr. J. S. BAXTER, University of Bristol, who has revised, added to, and in part rewritten certain sections of the book in order to adapt it to modern concepts and to meet the requirements of senior students who are preparing for their final examinations. The manual, although small, contains a large amount of essential anatomical and surgical information, given in a form which will serve to indicate the surgical significance of many simple anatomical facts which would otherwise be of merely topical interest. The illustrations are simple and serve the primary purpose of giving a visual impression of the structures described in the text. Some are, however, too diagrammatic, and in certain details are misleading with regard to the exact relative position of the parts depicted. These might well be replaced in future editions by simplified drawings made from actual sections of the parts represented; and also a few textual errors which have escaped the notice of the reviser might be rectified at the same time. The text is, however, remarkably free from error, and in these days when brevity is a necessity a short book of this type should help senior students at the trying period which precedes their final examinations. It is published by Baillière, Tindall and Cox at 4s. 6d.

The late RICHARD C. CABOT'S *Physical Diagnosis* was first published in 1900 and went through eleven editions in 34 years. In 1937, when a more complete revision of the whole work was required, the author asked Dr. F. DENNETTE ADAMS to undertake the task. The text was thoroughly revised and enlarged in the twelfth edition; now a thirteenth has appeared, and once again Dr. Adams has drawn freely on the experience of colleagues at the Massachusetts General Hospital. Like its predecessor, this edition may be said to represent so far as possible a cross-section of the views on diagnosis held by the staff of that world-famous institution. Dr. Cabot died on May 7, 1939, and his name is rightly preserved in the main title, side by side with that of his collaborator and successor. The book now comprises 900 pages printed in good type, with many clear illustrations among the text. It is published in this country by Baillière, Tindall, and Cox, price 27s. 6d., and will surely attract many new readers who feel a need for some guidance on diagnostic methods and processes.

Among numerous small cards and leaflets on the principles of first aid, one that deserves special mention is being sold at cost price (1d. each, or 6s. a 100) by Dr. BERYL HARDING (16, Drayton Gardens, S.W.10). On a folder which, when doubled, is the size of an identity card, she has set out brief and succinct instructions for the first-aid treatment of fractures, wounds, burns, and shock, together with diagrams showing the pressure-points and the application of a tourniquet—which, Dr. Harding points out, is a dangerous weapon. The sensible balance of the leaflet may be judged from the opening sentences: "First aid is mainly common sense. It is better to do too little than too much. First aid properly applied saves lives and stops panic. Bad first aid may do serious damage and even lose lives."

The second edition of R. A. FISHER and FRANK YATES'S *Statistical Tables for Biological, Agricultural, and Medical Research* contains four new tables and extends one of the tables in the first edition. The great value of the work is testified by the appearance of a new edition. Were a biological statistician confined to the use of one volume he would probably choose this. It might easily form part of active service equipment. The publishers are Oliver and Boyd and the price is 13s. 6d.

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BEFORE THE WHITE PAPER

The discussions between the Representative Committee and the Ministry of Health, which have gone on over the past six months, are now coming to an end. In these discussions the committee had no powers of negotiation and no mandate to commit the medical profession to any new policy. The function of the committee was to assert the point of view of the doctors of this country, and this it has done in an unequivocal manner. The twelve medical organizations represented on the committee will now in confidence report to their own bodies the gist of what has taken place. And among these the Council of the B.M.A. will receive such a report at a special meeting to be held on July 28. After that the Council will issue for the consideration of Divisions, early in August, a statement of what it considers to be the basic principles which should underlie the organization of the medical services of the country. The Annual Representative Meeting will assemble on Sept. 21 to 23 to consider these principles in the light of the discussions that have taken place at Division meetings. It is possible that by that time the Government will have published a White Paper on the provision of a medical service to the nation which will satisfy the proposals arising out of Sir William Beveridge's Assumption B. The White Paper will have to be examined with care and deliberation before the medical profession formulates its views on it. It will therefore not be on the Agenda for the A.R.M., for it should first of all be discussed by the Divisions, by Council, and subsequently by a special meeting of the Representative Body. When the views of the B.M.A. and other medical bodies and organizations are declared, a Negotiating Body will be set up to thrash matters out with the Ministry of Health. The situation, then, can be looked upon as falling into three phases. The first and present phase is to be given to the re-formulation of fundamental principles. In the second the White Paper will be examined and appraised. The third phase will be negotiations with the Ministry.

The inadvertent disclosure of the contents of a Ministry of Health memorandum showed that the lines along which the Ministry was thinking diverged sharply from certain principles which the medical profession holds, and holds firmly. At a moment when discussion groups—and in particular the Medical Planning Commission—were looking into the question of health centres, the Ministry confused the issue by linking on to this idea one that is abhorrent to the profession at large—namely, a whole-time State salaried medical service, with the doctor employed in the centre by the local health authority. The first principle, then, of any future reorganization of medical practice is that this should not be based upon a concept of a whole-time State salaried medical service. As Dr. Charles Hill, whose address to a recent meeting at Ipswich is printed elsewhere in this issue, points out, a whole-time salaried service may be a most appropriate form for certain kinds of medical work—for example, the control of environmental health by the public health service. It seems clear, too, that as a rule the whole-time research worker must live on a whole-time salary and with a background of security. But doctors in general challenge the view that the intimacies of family practice can be entered into by an employee of the State or of a local authority. Bound up with this is the question of free choice of doctor. There is an attempt to decry this, and largely by those who have had no experience of private practice. The doctor employs techniques but is not a technician, and in fact the precise technical aid which he can give to his patient is very limited. What matters most is his quality as a human being in relation to another human being, and the fitness of this quality in any one case is something that only the patient in need of his help can judge. Such matters as this are alien to the administrative mind, which moves neatly and precisely in a world of time-tables and administrative buildings.

For years doctors individually and collectively have cried out against the crippling effects upon health of damp, crowded, and ill-ventilated houses, against lack of food and against food that is bad in quality and bacteriologically contaminated. The medical profession cannot be expected to hold in high regard a Ministry of Health which tolerates the spread of disease through infected milk. A profession which is not controlled by such a Ministry can freely voice its criticism and its policy in this and in other respects. We lay it down as another principle that the provision of good food, houses hygienically built, facilities for games, rest, and recreation in the open air, sound education in ways of thinking, will all promote the health of the public far more than will a reshuffling of the medical services. First things should come first. Medicine progresses not by an increase of authority or of authorities, not by the issue of regulations, but by increase and application of knowledge. Fundamental to this are medical education and medical research—and the State provision for medical research amounts (if we may hazard a guess) in one year to approximately the same sum as the Government has recently spent on Press campaigns against two infections. Another principle firmly held for years by medical men is that lack of money should not prevent a sick person from receiving medical aid when in need of it. Doctors have recognized this by giving their services without pay on the one hand, and by advocating the extension of National Health Insurance so as to include 9/10ths of the population on the other—an advocacy which has so far fallen on deaf ears. As to reform of existing services, the medical profession has been more progressive in its demands for this than has the Ministry of Health under a succession of Ministers of varying political colour. Another of the principles which the profession maintains is the need for thorough reform of both central and local health departments. The function of the State, as Dr. Hill points out, is to see that a comprehensive health service is provided. But it is not the duty of the State to control doctors on the basis of an employer–employee relationship. Most medical men in this country are opposed to the socialization of medicine.

These briefly are some of the major principles held by the medical profession. We feel sure that the Minister of Health is too good a democrat to wish to impose upon a profession that has no reason to be ashamed of its record a form of service that denies to practising doctors that freedom of professional action and initiative which they believe deeply to be indispensable to good work. That in some instances this freedom may be abused is a criticism not of the principle of freedom but of human nature. It is hoped, therefore, that the Government White Paper will be restricted mainly to exposition of the issues to be discussed, and that these issues will not be prejudged in set proposals, however tentative, to which in the main the Government may declare itself committed. It is hoped, too, on more than one ground, that the Government will be scrupulous not to take advantage of the abnormal

conditions in which we now live by putting a loyal and patriotic body of men in a position of having to oppose a National Government in time of war. We gravely doubt the wisdom of making in time of war any cut-and-dried plan for the conduct of medical services in time of peace—that is, if peace is regarded as the normal background of national life. To try to settle such a large issue in an atmosphere charged with the emotions of war would be unjust to both the medical profession and the public.

H 11 FOR CANCER

About two years ago many members of the profession received through the post a circular advertising a commercial preparation called H 11 for the treatment of cancer. The discoverer of the preparation is Mr. J. H. Thompson, B.Sc. It consists of an extract of urine and is described as "a concentrated preparation of growth-inhibiting substances which are normally present in the body." Many practitioners have used, and doubtless are still using, the preparation. In this issue of the *Journal* we publish two articles dealing with the matter: one by Mr. H. A. Kidd, who has treated 51 cases of cancer in human beings; the other by members of the Scientific Staff of the Imperial Research Fund, who have tested the preparation on tumours of mice. Neither article supports the claims made for H 11. So that we may be clear what these claims are it is as well to describe those coming from the laboratories where Mr. Thompson works: "Tumours [in mice] may either entirely disappear or be replaced by small fibrotic masses." Under the heading of "Clinical Indications" the following statement is made: "Various types of cases of advanced inoperable carcinoma treated with H 11 extract in hospitals and private practice have resulted in marked reduction in size of both primary and secondary growths, and eventual disappearance. It is therefore a useful form of therapy in cases of cancer untreatable by other recognized forms of treatment. Approximately 70% of cases have shown objective signs of improvement." It is recommended that treatment with H 11 should not replace treatment by operation and deep *x*-ray therapy when these are considered by expert opinion to be applicable.

Of 51 cases treated by Mr. Kidd "14 received insufficient treatment, and of the remaining 37 patients 11 are dead and no reply was received from 5. Of the 21 patients known to be alive 4 have been under observation for under one year, 12 for over one year, and 5 for over eighteen months." Experienced practitioners are well aware of the difficulty of assessing the value of any treatment of cancer in human beings, and all would agree that 18 months is too short a time to reach a firm conclusion that a treatment is of value. Mr. Kidd's experience is hardly likely to encourage doctors to use H 11, especially as therapeutic experiments on human cases are beset with difficulties. Tests on animals can be arranged in accordance with scientific principles. A series of tumours of one kind, all starting on the same day and growing at the same rate, can be provided; proper controls can be set up and animals killed at regular intervals to determine whether the treatment has had any effect on the cells of the tumour. Using the large resources of the Imperial Cancer Research Fund in this manner, Prof. Gye and his colleagues have been unable to detect any inhibition of tumour growth in animals treated with H 11.

Mr. Thompson began his researches some 12 years ago with the dangerously seductive idea that cancerous growth is merely excessive physiological growth, and that "inhibition of growth" is brought about by a hormone located in the parathyroid bodies. The difference between normal physiological and malignant growth was apparently regarded as quantitative and not qualitative, a mistaken view which is often assumed to be true in current literature and which is completely disposed of by mere reference to the growth of an embryo and the slow growth of many cancers. The unique nature of new growths—the unlimited character of the growth, the fact that the stimulus to multiplication of the malignant cell lies within the cell itself, and the failure of the forces which control physiological growth to control cancerous growth—does not seem to have been taken sufficiently into account by Mr. Thompson. That this is not a harsh or unwarranted judgment is well shown by the way in which the supposed value of H 11 is estimated: "The degree of inhibition produced by H 11 extract diluted nearly 5,000 times on the root growth of selected oat seedlings grown under strictly controlled conditions is measured, and the value of the extract adjusted to equal that known to cause regression of Twort carcinoma in mice." It needs no special knowledge or perspicacity to be aware of the fallacy both of correlating the growth of oat seedlings with the growth of cancer and of assuming that normal physiological growth would be exempt from such a non-specific inhibition. If it were true that H 11 can actually inhibit growth in general, then patients injected hundreds of times over periods of months would certainly show some signs of interference with normal growth. Mr. Kidd's patient No. 26, for example, was injected 730 times; surely after a few weeks the patient must have shown some signs of inhibition of growth of skin and hair and of blood cells if H 11 has the property claimed for it. Long before the 730th dose was administered the general consequences of physiological decay would have been observed.

H 11 has been available to practitioners now for the past two years, and apparently practitioners up and down the country have used this preparation for their patients suffering from cancer. It has presumably been sold both as a scientific remedy and as a product which will bring in a financial return to those who undertake the ordinary business risk of manufacture and marketing. This is of course normal practice in this country, against which nothing can be said. Nevertheless during the past years, and especially since the formation of the Therapeutic Trials Subcommittee of the Medical Research Council, it has not been uncommon for manufacturers to submit for controlled clinical trial by responsible bodies products believed by preliminary research to be therapeutically beneficial. In fact signs of increasing co-operation between the pharmaceutical industry, research institutes, universities, and hospitals have been welcomed by the medical profession, aware as it is of the great benefits to medicine to be expected when the vast resources of modern industry, in material, equipment, and scientific knowledge, are harnessed to the existing machinery for clinical research. We therefore regard it as unfortunate that a remedy believed to have the power of inhibiting growth was produced and marketed for the treatment of cancer in the absence of further controlled observations by men with special knowledge of the scientific and clinical aspects of cancer. We do not know where the fault lies, but the fact remains clear that after this preparation has been used by practitioners for two years examination of its properties in the laboratories of the Imperial Cancer Research Fund—one of the leading organizations devoted to cancer research—shows it to have no action on animal tumours. Neither are the claims made on behalf of the remedy supported by the clinical testing to which it has been subjected by Mr. Kidd at the Kingston County Hospital. Cancer is such a grave disease and is looked upon by the general

public with such intense fear that anyone believing that he has a contribution to make to its relief or cure should regard it as his bounden duty to exercise the utmost scientific caution in making claims on behalf of a cancer remedy, however strong and sincere may be his belief in it. Practitioners similarly have to steel themselves against the natural importunity of sufferers and their relatives before yielding to the temptation to try something on the basis, say, that if it does no good at least it can do no harm. The harm that is done is by a raising of false hope.

HAEMOLYTIC MECHANISMS

The study of anaemia in man has switched for the moment from the field of nutrition to that of haemolysis. The increase in the practice of transfusion has focused interest on transfusion reactions. Mollison[1] has discussed the investigation of these reactions recently in our columns and has shown that they are usually due to mistakes in blood grouping, failure to maintain adequate standards in blood storage, or the use of Rh-positive blood for transfusion to recipients who have become sensitized to the Rh agglutinogen. The discovery of the Rh antigen must be ranked as the most concrete gain from these and similar investigations. Some 15% of people have red cells which lack this antigen, and they therefore develop antibodies to it when they receive blood or are impregnated with a child which possesses it. Blood group incompatibility between mother and child, usually in relation to the Rh factor but sometimes to the normal A and B agglutinogens, is responsible for the grave anaemias and jaundice of the newly born. It is now proposed that these anaemias, with their sequels of "kernicterus" and fibrous dysplasia of bone, should be grouped together under the heading of haemolytic disease of the newly born.[2] The advance of chemotherapy has also led to an increase in haemolytic anaemia. By 1941 nearly 100 cases of haemolytic anaemia due to the sulphonamides had been reported in the literature.[3] This appears to be an uncommon idiosyncrasy. It often happens, of course, that breakdown products of these drugs damage the haemoglobin molecule and change it to methaemoglobin. In certain individuals, however, products arise which damage the cell envelope and cause lysis. This metabolic error is persistent, and at any subsequent time a small test dose may induce haemolysis in the patient.[4] The antituberculous drug promanide, which is related to the sulphonamides, much more commonly induces haemolysis, and it is so usual with the anthelmintic phenothiazine that it is unjustifiable to use it in man. These drugs are not themselves haemolytic *in vitro*, and it may prove a laborious task to discover the path—perhaps the final common path—by which haemolytic degradation products arise. Earlier studies are well summarized in von Oettingen's[5] review of organic chemical industrial hazards to health, and some interesting results have recently been obtained by Emerson and co-workers,[6] who have shown that several derivatives of these drugs and chemicals produce increased volume and fragility of erythrocytes *in vitro*. Perhaps there is a tendency to take too narrow a physicochemical view of haemolysis, and more might be learned by thinking biochemically, in terms of ferments and their substrates—the method which has proved so fruitful in elucidating the mechanism of chemotherapy.

With other forms of haemolytic anaemia more progress has been made by studies *in vitro*, though understanding is still far from complete. We can demonstrate the actions of cold in syphilitic haemoglobinuria, acid in nocturnal haemoglobinaemia, and lysolecithin in acholuric jaundice. Until this year complete ignorance existed of the mechanism at work in the most important of all haemolytic anaemias, blackwater fever. Maegraith and co-workers[7] have now presented evidence that the tissues normally contain a lytic enzyme, which is species-specific, and the serum contains an inhibitor, which is non-specific. Washed guinea-pig lung haemolyses a suspension of guinea-pig red cells, but the action is inhibited by guinea-pig or human serum in appropriate dilution. A method is therefore available for titrating the concentration of the inhibitory factor in the serum. They have subsequently shown[8] that the activity of the inhibitory factor is reduced during the haemolytic crisis of blackwater fever. These results are important, not only because they imply a new technique for the study of blackwater fever but because it is possible that the acute haemolytic effects of chemical substances may be due to an interference with either the production or the action of the serum inhibitor.

GOITRE IN COUNTY TIPPERARY

The Medical Research Council of Ireland in its report for 1942 records that for several years it has supported an inquiry into the problem of goitre in the South Riding of County Tipperary. Attention was originally drawn to the prevalence there of colloid goitre by Dr. M. Naughten, county medical officer of health. The Council then arranged that Dr. J. Shee should visit Prof. David Marine of New York to study the methods used in the goitre areas of the U.S.A., with a view to making an inquiry on similar lines, including a survey to determine the incidence and severity of the condition and an investigation of the iodine content of the soil. In Tipperary the disease is not associated with cretinism or mental deficiency. Dr. Shee's survey revealed that goitre was present in about 50% of the school children in certain districts. The estimation of iodine intake and output presented a more difficult problem. Preliminary investigation of the iodine content of foods by Dr. E. M. Mason did not disclose any gross deficiency, but a more detailed inquiry in Cashel Industrial School showed that though the health and development of the children were in all other respects highly satisfactory the incidence of goitre approached 90%, and this was associated with a low intake of iodine; the iodine output was *nil*. In the Council's experience the results of iodine treatment have not been dramatic, but a careful survey of individual cases did show an improvement, and there was also in some schools evidence of improvement which looked statistically significant. At this stage the situation was carefully reviewed, with an eye to decisions on future policy. As a result the investigation into iodine intake has been widened to include the intake under the ordinary dietetic conditions of the countryside districts of Tipperary where goitre is prevalent, and also other dietetic factors which might have a bearing on the problem. The Council has also instituted a scheme for thorough iodization, in a limited zone, with a view to determining the effect on the incidence of goitre; for this purpose Dr. Stephanie Whelan will direct the iodization of (*a*) pregnant women, (*b*) children before school age, and (*c*) school children in two goitre districts. The Council hopes, in four or five years, to be in a position to claim that by such measures

1 *British Medical Journal*, 1943, **1**, 529, 559.
2 Ibid., 1942, **2**, 738; 1943, **1**, 53.
3 Trier, M., *Acta med. scand.*, 1941, **108**, 117.
4 Idris Jones, E., *Lancet*, 1943, **1**, 201.
5 *Physiol. Rev.*, 1942, **22**, 170.
6 *J. clin. Invest.*, 1941, **20**, 451.
7 *Nature*, 1943, **151**, 252.
8 *Lancet*, 1943, **1**, 573.

goitre can be suppressed in the coming generation. The whole work on this problem illustrates the need for long views in research, even where the investigation appears at first sight fairly straightforward. Acknowledgment is made of the help given by the Iodine Educational Bureau and its director (Dr. F. C. Kelly), Prof. J. Reilly, Dr. Naughten, and Dr. D. K. O'Donovan. Another inquiry during the year was into bacteriological problems arising out of a grave epidemic of diarrhoea and enteritis in Dublin. For these and other purposes grants were made to 25 individuals, and the report gives a summary of work done by grant-holders and a list of their publications.

A POINT IN E.C.G. DIAGNOSIS

The electrocardiographic (E.C.G.) changes in cardiac arrhythmia and in coronary thrombosis have been well described and classified. E.C.G. changes of a less definite nature have often been rather loosely interpreted as indicating either myocardial disease or coronary sclerosis. Katz and others[1] have compared the post-mortem findings with the E.C.G. diagnoses in 149 consecutive necropsies. They have confirmed the specific nature of various E.C.G. patterns of right and left ventricular strain. These patterns are not the result of myocardial infarction, but are shown to be associated anatomically with ventricular hypertrophy. Myocardial infarction may, however, simulate these patterns. The authors distinguish a simple change in electrical axis (not commonly associated with cardiac abnormality) from ventricular preponderance—usually evidence of myocardial strain. More recently Katz and others[2] have noted E.C.G. patterns which are a combination of right and left ventricular strain. The absence of axis deviation in the presence of clinical and radiological evidence of cardiac enlargement is presumptive evidence of combined ventricular strain. They have described six patterns of combined ventricular strain: they are made up of QRS contours of one type of ventricular preponderance with ST changes associated with hypertrophy of the other ventricle.

This fresh conception of E.C.G. interpretation would be most helpful if it were not that myocardial infarction may cause similar patterns. It is not always easy to be certain in a particular patient that coronary thrombosis has not occurred—in fact, that may be the very point which the cardiogram is to decide. This is especially true in hypertensive heart disease. Sharpey-Schafer[3] suggests that the problem may be solved by giving potassium by mouth; this, according to him, accentuates the T-wave inversion of myocardial infarction and tends to elevate the inverted T waves of ventricular preponderance. It will be interesting to see how this cardiographic conception of myocardial strain stands the test of further investigation by other workers, and whether it is going to be of real value in diagnosis and prognosis.

THE V.D. PROBLEM IN CANADA

The report of the proceedings of the South-Western Canada conference held at Edmonton in October, 1942,[4] shows how alive the Canadian authorities are to the problem of venereal disease; their activities have led to a very considerable fall in the incidence of these diseases. One of their great problems has been brothels, and various resolutions were passed calling for more active measures in dealing with them, their owners, and their inmates. Of other subjects discussed the more important were pre-marital blood tests, shorter and more intensive treatment of early syphilis, standards of cure of syphilis, status of serological tests for syphilis, diagnosis and treatment and standard of cure of gonorrhoea, and the liaison and co-operation between the Armed Forces and the civil authorities in finding and dealing with alleged sources of infection. Modern methods of treatment of syphilis all tend to shorten and intensify therapy, and when a short method which is also safe and effective is discovered it will prove a great advance on those hitherto practised. Recent advances in serology have shown how many pitfalls there may be in serum tests for syphilis, and more and more conditions both pathological and physiological are being added to the list of those which may give false positive reactions. Case-finding and contact-tracing occupy a prominent place in the discussions, and there can be no doubt that these procedures are likely to have a very salutary effect in reducing the incidence of venereal disease. Such a conference wherever held must do a vast amount of good in the way of both propaganda and education; the idea might well be copied by other countries, and an international one after the war has much to recommend it.

[1] *Amer. Heart J.*, 1942, **24**, 627.
[2] *Brit. Heart J.*, 1943, **5**, 27.
[3] Ibid., p. 80.
[4] *Proceedings of the South-Western Canada Conference on Venereal Disease Control.* Issued by the Department of Public Health, Government of the Province of Alberta, Edmonton.

NEW REGULATIONS FOR THE F.R.C.S.

As explained in our Universities and Colleges column this week (p. 90) the Council of the Royal College of Surgeons of England has revised the regulations for the Fellowship, and these will come into force after the end of 1943. The changes embodied in the new regulations are possibly the most important that have been made since the Fellowship was instituted under the Charter of 1843. After Nov. 29 next the Primary Examination cannot be taken by undergraduates, and the subjects will be anatomy (including normal histology), and applied physiology and the principles of pathology. No candidate for the Final Examination will be admissible without producing evidence of having been engaged in the acquirement of professional knowledge for at least two years after obtaining the M.R.C.S. or some other qualification recognized by the Council of the College. A point to note is the rearrangement of the dates of the examinations, enabling those who are eligible, and who may wish to do so, to enter for both the Primary and the Final at the same time, on the understanding that should they be unsuccessful in the Primary their entry for the Final will be withdrawn and the fee paid for that examination will be refunded in full. All who aspire to the diploma of F.R.C.S.Eng. should write to the Director of Examinations, Examination Hall, Queen Square, W.C.1, for copies of the new regulations.

The Council of the Royal College of Surgeons of England on July 8 received with acclamation the announcement that Mr. Churchill had accepted the Honorary Fellowship of the College offered to him on the occasion of the celebration of the centenary of that Fellowship. All Fellows and Members of the College will share the Council's gratification.

In last week's *Supplement* it was announced that the Annual Representative Meeting of the B.M.A. would be held on Wednesday, Thursday, and Friday, Sept. 22, 23, and 24. It has been found necessary to alter this arrangement. The meeting will be held on Tuesday, Sept. 21, Wednesday, Sept. 22, and Thursday, Sept. 23.

A NEW METHOD OF GAS TRAINING

BY

POLLOK DONALD, M.B., Ch.B., D.P.H.

Teachers of first aid and "gas" know only too well that success can only be obtained by constant repetition of essentials. Now, gas training has never been popular outside the lecture-room, possibly owing to the practical training necessitating a scattered personnel. Whatever the reason, the effect is that the personnel become bored and apathetic. To obviate this apathy we introduced a miniature method of gas training which enabled us to lessen the number of practices in the gas section and which, we found, overcame many of the drawbacks and at the same time proved interesting, educative, and even attractive.

In the reception-room of our first-aid post are a number of canvas screens. These were utilized to make partitions, as shown in the accompanying sketch, while forms were used for the front walls, the post thus being fully open to view. In short, the various sections of a gas post were linked up in miniature so that all could see and hear, just as in a lecture-room. The whole can be rigged up in a few minutes. Some of the equipment is the same as in the gas post, but cotton reels are made to represent the shower-bath nozzles at the end of short lengths of rope, the water, etc., being make-believe.

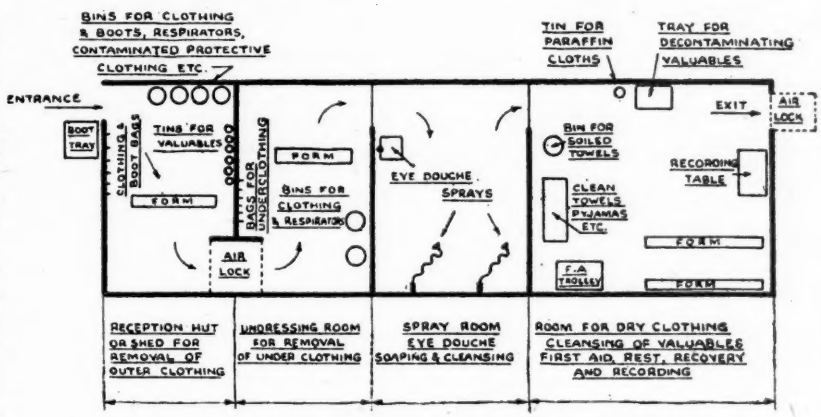
BINS FOR CLOTHING & BOOTS, RESPIRATORS, CONTAMINATED PROTECTIVE CLOTHING ETC.
TIN FOR PARAFFIN CLOTHS
TRAY FOR DECONTAMINATING VALUABLES
ENTRANCE
EXIT
AIR LOCK
BOOT TRAY
CLOTHING & BOOT BAGS
TINS FOR VALUABLES
FORM
BAGS FOR UNDERCLOTHING
BINS FOR CLOTHING & RESPIRATORS
AIR LOCK
EYE DOUCHE SPRAYS
BIN FOR SOILED TOWELS
RECORDING TABLE
CLEAN TOWELS PYJAMAS ETC.
F.A. TROLLEY
RECEPTION HUT OR SHED FOR REMOVAL OF OUTER CLOTHING
UNDRESSING ROOM FOR REMOVAL OF UNDER CLOTHING
SPRAY ROOM EYE DOUCHE SOAPING & CLEANSING
ROOM FOR DRY CLOTHING CLEANSING OF VALUABLES FIRST AID, REST, RECOVERY AND RECORDING

Diagram of miniature gas-cleansing station for demonstration and instruction.

The limit of undressing is that a jacket is removed in the first section to represent outer clothing, while a pullover or waistcoat is removed in the second section to represent underclothing. The dressing is carried out by merely holding the robe or pyjamas in front of the casualty, symbolical of having put them on. The personnel play the parts of casualties and operators. This is especially instructive, since the "casualty" must have a knowledge of the supposed lesions and the operator must know how to question and interpret. Moreover, such carried articles as respirators, helmets, handbags, metallic and paper valuables, crutches, etc., must be dealt with, and, since all are listening and observing, the practice becomes really valuable. We have certainly found it to work out this way, and I can confidently recommend it to those who have not tried it.

Fortunately we have had no experience of actual cases in this country. This, however, has created bands of theorists, so that each post doubtless has its own pet technique. So long as general principles are observed this makes little difference, provided the personnel know what to do and how to do it. The object of this communication is not to instruct but to show how instruction may be given in a way acceptable to all concerned. We do advocate, however, that practice be carried out in a thorough manner from entrance to exit. Slackness is most infectious, and is one of the primary causes of discontent.

LEPROSY RELIEF IN THE EMPIRE

The annual meeting of the British Empire Leprosy Relief Association was held at the India Office, with the Duke of Devonshire, Under-Secretary for the Colonies, presiding. The annual report, which was adopted, mentioned the work which the medical secretary of the Association, Dr. E. Muir, has been seconded to carry out in the British West Indies, where he is assisting in the control of leprosy in Trinidad and other islands. His work there has coincided with the initiation of operations under the Colonial Development and Welfare Board, and he is in collaboration with the medical adviser to the comptroller, Sir Rupert Briercliffe, who has had experience of leprosy in other parts of the world.

Sir William Peel, chairman of the executive committee, said that the oversea workers whom the Association had sent out were stationed for the most part in Nigeria, the Sudan, and Tanganyika, and consisted of three doctors, fourteen "Toc H" workers, one nurse, and one lady lay worker. In Nigeria the incidence of leprosy was extremely high; the number of sufferers was estimated at over 200,000. In Northern Rhodesia the Governor had reported that the leprosy work already started there by certain missionary societies on lines suggested by Dr. Muir had proved satisfactory, and that his Government had made additional provision in Estimates to enable the work to continue on a more extensive scale.

The medical address was given by Major-General Sir Cuthbert Sprawson, and took the form of a review of the progress made during the 19 years since the Association was founded. He contrasted the leper asylum in India at the beginning of that time with what it is to-day. The care of the patients had greatly improved, the scientific classification of cases, their laboratory investigation and efficient treatment were now matters of routine, patients were kept usefully employed, and the atmosphere was one of hope, stimulated by the sight of many leaving hospital fit to return to the outside world. The improvements in treatment had included, in the first place, Sir Leonard Rogers's introduction of active derivatives from the oil and from various species of hydnocarpus seeds, better methods of educating the native population on the disease and the proper mode of living for those who had contracted it, and increased knowledge of nutrition, malnutrition being a predisposing cause. The purely laboratory side of research had, on the whole, yielded disappointing results, but the new leprolin and the iodide test had proved of value. In the matter of general hygiene more leper settlements and clinics were required, also separate institutions for those who had passed through the contagious stage but were too old or feeble to work, and who took up room in hospital which was wanted for cases needing more urgent treatment.

EUROPEAN ASSOCIATION OF CLINICAL PATHOLOGISTS

At a meeting of the recently formed European Association of Clinical Pathologists held in London the following officers were elected: President, Dr. S. C. Dyke (England); Vice-President, Prof. E. J. Bigwood (Belgium); Secretary, Dr. F. Pick (Czechoslovakia); Treasurer, Dr. B. L. Della Vida (Italy); Council, Drs. A. Benau (Yugoslavia), D. C. Canné (Netherlands), F. Duran-Jorda (Spain), Prof. F. Silberstein (Austria), Drs. G. Ungar (France), J. Ungar (Czechoslovakia). The annual subscription, including entrance fee, was provisionally set at 10s. The meeting adopted rules for the procedure of the Association while its members are mainly in this country, and instructed the Council to consider and report to a future meeting on the procedure to be adopted after the liberation of Europe. A resolution was passed to the effect that free interchange of workers in clinical pathology between the nations of Europe would be an important factor both in the advancement of scientific medicine and also in the development of a common European mentality, these being the main objects of the Association. The Council was instructed to explore the matter and report to a future meeting. It further invited the co-operation of the British Association of Clinical Pathologists in the project. A letter was received from the secretary of the B.A.C.P. inviting members of the European Association to participate in its gatherings.

Membership of the European Association is open to medically qualified men and women of all European nationalities engaged in any form of medical laboratory work. Those interested should communicate with the secretary, Dr. F. Pick, Department of Clinical Pathology, the General Hospital, Walsall, Staffs.

B.M.A. LUNCHEON TO OVERSEA MEDICAL SERVICES

A luncheon at which occasion was taken to welcome representatives of the medical services of the Dominions and Allies at present in London was given by the British Medical Association at the Savoy Hotel on July 6. The guests were received by Sir Beckwith Whitehouse (President of the Association), who was supported by the Chairman of Council (Mr. H. S. Souttar), the Chairman of the Representative Body (Dr. Peter Macdonald), and the Treasurer (Dr. J. W. Bone). The oversea guests included representatives of Canada, Australia, and New Zealand, of the United States, and of Belgium, Czechoslovakia, Free France, Holland, Yugoslavia, Norway, Poland, and the U.S.S.R., the last-named country being represented by Prof. Sarkisov.

Among other distinguished guests were the following:

Sir John Anderson (Lord President of the Council), Mr. Ernest Brown (Minister of Health), Mr. Thomas Johnston (Secretary of State for Scotland), Sir John Maude (Secretary, Ministry of Health), Sir Wilson Jameson (Chief Medical Officer of the Ministry), Dr. A. Davidson (Chief Medical Officer, Department of Health for Scotland).

Surg. Vice-Admiral Sir Sheldon Dudley (D.G., Medical Service of the Navy), Lieut.-General Sir Alexander Hood (D.G., Army Medical Services), Air Marshal Sir Harold Whittingham (D.G., Medical Service of the R.A.F.), Major-General Sir Ernest Bradfield (Medical Adviser, India Office), Prof. F. R. Fraser (D.G., Emergency Medical Service).

Lord Moran (President, Royal College of Physicians of London), Sir Alfred Webb-Johnson (President, Royal College of Surgeons of England), Sir W. Fletcher Shaw (President, Royal College of Obstetricians and Gynaecologists), Sir Stanley Woodwark (Master, Society of Apothecaries), Dr. C. McNeil (President, Royal College of Physicians of Edinburgh), Dr. J. H. Macdonald (President, Royal Faculty of Physicians and Surgeons of Glasgow), Sir Henry Tidy (President, Royal Society of Medicine), Dr. Cyril Banks (President, Society of Medical Officers of Health), Mr. S. T. Irwin (Chairman, North of Ireland Medical War Committee).

Sir Henry Dale (President, Royal Society), Sir Edward Mellanby (Secretary, Medical Research Council), Sir Malcolm Robertson (Chairman, British Council), Sir Hugh Lett (Chairman, Committee of Reference), Sir F. E. Fremantle (Chairman, Medical Committee of the House of Commons).

The guests also included former holders of high office in the Association (Lord Dawson of Penn, Sir Kaye Le Fleming, and Dr. H. Guy Dain, former President, Chairman of Council, and Chairman of Representative Body respectively), the Chairman of the Metropolitan Counties Branch (Sir Crisp English), and the chairmen of the various headquarters committees.

"Allied Medical Services"

After the toast, "His Imperial Majesty," had been proposed by the PRESIDENT and duly honoured, Mr. H. S. SOUTTAR submitted "Allied Medical Services." He said that the profession in Great Britain welcomed these comrades in a struggle upon the issue of which depended all that they held dear. The profession was a brotherhood to fight against disease, and the Allied nations a brotherhood to fight against the devil. Doctors had an interest in both quarrels, and would be satisfied only with a double victory. He referred to his experiences during his recent visit to India, and especially to the medical services and hospitals which he saw in North Africa. It was inspiring to observe the energy and vigilance which were maintained and the smoothness with which the Imperial Forces and those of the Allies all worked together, in the furnishing, for example, of mobile surgical teams with every possible equipment, in the use of the great ambulance planes, and in the provision of blood banks and other life-saving and health-restoring measures. But great as had been the difficulties of the African campaign and high as the achievement of its medical services they were left marvelling at the difficulties and the achievements of Russia, whose representatives they saluted on that occasion.

The toast was responded to by Brig.-Gen. PAUL HAWLEY (U.S.A.), who said that the welcome given in Britain to the Allies had been most cordial. One of the few agreeable experiences in this war was the opportunity which it had afforded to the medical professions of the Allied nations to associate with one another. In peace their leaders had always visited back and forth, but the opportunity of such association had come rarely to the rank and file. The rank and file of the American profession were now learning something during their visit here, and they fondly hoped that in their turn they might leave behind them two or three useful ideas when they returned home. Many of the landmarks in the history of medical science had come about through the achievements of the ordinary worker. Sir William Osler once said that the greatest contribution that America had made to physiology was the work of William Beaumont,* a very undistinguished Army surgeon, stationed in a veritable wilderness. It might be given to some member of the rank and file now serving far from home in the Army to make a similar contribution.

The Lord President on "Medicine"

Sir JOHN ANDERSON, in proposing the toast of "Medicine," mentioned his own official responsibility, as Lord President of the Council, for medical research and indeed for research of all kinds. When research was mentioned in connexion with this war people thought inevitably of the perfection of the engines of destruction, but he was glad of the opportunity of calling attention to the fact that in quite another field—that of the health, comfort, and well-being of the Armies and of the civil populations—science had made a contribution no less conspicuous and spectacular. They were all aware that in the great campaigns of the nineteenth century disease took a toll far exceeding that taken by the enemy. In the South African War more men died of disease than of wounds. In the first European war the troops were beginning to receive the benefit of the advances in medical science which had been made in the early years of the century, especially in the field of bacteriology. Since then there had been further progress. It was gratifying to learn that when a considerable number of German and Italian prisoners came into our hands in North Africa and were found to be riddled with disease—typhoid and dysentery—our medical men who set to work upon them with the resources at their disposal showed conclusively that, for example, the T.A.B. vaccines with which our own people were supplied were infinitely superior to what had been supplied by the enemy. With the resources for combating infection available to British medicine these infections among prisoners of war were being cleared up in a remarkable way. A great new range of therapeutic agents had been made available by the devoted work of biochemists on the sulphonamide compounds, which had completely revolutionized the treatment of infective conditions. He had lately been told of new uses found for these agents as a result of which the treatment of septic conditions, so fruitful a source of illness and death, had been completely reformed. These great advances were due to the work of men who had laboured for the most part anonymously, or at least obscurely, in various laboratories.

But it must not be supposed, Sir John Anderson continued, that they had reached the end of their problems. He was told that the problems presented by cases of traumatic shock were still most baffling. He could never forget, having spent some years of his life in India, that the problem of malaria in eastern regions and in the islands of the Pacific and Indian Oceans (as had been shown again in Madagascar) taxed the utmost resources of medical science. A complication here was the loss of the main sources of the production of quinine, but much work was being done to make good the deficiency by the production of new synthetic drugs, in which American manufacturers were actively collaborating with our own, and he hoped that before long there might be adequate supplies of atebrin when quinine was not available.

Contributions not less important than these had been made along other lines of research. The Medical Research Council had been able by a close study of the conditions under which men served in tanks and aeroplanes to devise measures for ensuring their health and improving their comfort and efficiency in such environment. After the war hundreds of millions in Europe would be found suffering from malnutrition to an extent never before conceived. What would follow in the train of that malnutrition when vast movements of population took place, when armies were demobilized, and workers returned to their homes? It was a task which would call for the utmost endeavour and capacity, and he was glad to feel that in this prospective service medical men of all the Allied nations would collaborate. Two years ago, following a meeting at St. James's Palace, an organization was set up to deal with problems of European relief after the war. A medical committee had been established in connexion with that organization, and the

* William Beaumont (1785-1853), surgeon in the U.S. Army. Published in 1835 *Experiments and Observations*, dealing with the chemical nature of digestion, the significance of the gastric juice, and the causes of interruption of the secretion.

problems with which it would have to deal would demand the utmost that could be contributed collectively in knowledge and service. In associating with the toast the names of representatives of three countries, one of them Poland, he made a sympathetic reference to the tragic death of General Sikorski.

Three Responses

Prof. A. T. JURASZ (Poland) referred to his visit to this country twenty years ago, to the International Congress of Surgery, and mentioned that the Congress was opened by the British Foreign Minister of that time, the late Lord Curzon, who confessed, as a man who had never had anything to do with doctors, how the atmosphere of such a medical gathering inspired him. But he added, "Gentlemen, Europe is very sick. Can you suggest a suitable operation to cure her?" Europe to-day was certainly more injured and diseased in every part of her organism than it was five years after the last armistice, and the principles of medicine might well be applied in the great task of reconstruction. The modern medical point of view comprehended not only the physical derangement but the mental and spiritual background. It was the psychical injuries inflicted by the aggressor upon helpless and suffering peoples that would call for the first attention, the most patient and understanding treatment. It would be well if political leaders themselves were imbued with the spirit and aims of true medicine.

Col. J. HOLST (Norway) told of a physician who, narrating the triumphs of internal medicine, said that presently it would become difficult to find a disease from which a patient could die or by which a surgeon could live. He was glad, as a visitor from another country, to have seen the spirit in which British doctors and the British people were responding to the demands of war. There were differences of opinion, he said, as to the new orientation of medicine, but in medicine as in life, while outward forms changed, fundamental principles remained.

Finally, Dr. J. B. MILLER, Deputy Chairman of the Representative Body, after entertaining the company with some student reminiscences, spoke of his pleasure in responding on behalf of general practitioners—the patient oxen who trod out the corn—as well as of the consultants and specialists who on occasion descended from the heights of Olympus to enlighten them.

NEW FIELDS FOR THE ALMONER

Two directions in which the social worker may find new opportunities were indicated by Prof. James Mackintosh of Glasgow in an address at the annual meeting of the Institute of Hospital Almoners. He pointed out that the almoner was now taking her proper place as a member of the company of healing, instead of being a mere assessor of finance, but she had yet to be brought into association with the teaching of medical students. At the Johns Hopkins Medical School the student in his third clinical year was sent for tutorial instruction for one or two hours a week at the almoner's office. The almoner took the student through some of her recent cases, showed him what was written about the diagnosis when the patient came in, what was ascertained on preliminary inquiry as to his social circumstances, and what requests for further information were made by the physician. Presently the student was sent out to some (carefully selected) homes, where he pursued his own inquiries, at first in a stiff and perhaps rather absurd way, but presently he gained the idea of what was meant by social work. A second field of opportunity, but a more vaguely defined one, was open to the almoner in connexion with general practice and the coming of the health centre. The Cathcart Committee in Scotland in 1936 recommended that the family doctor should be the health adviser to the family, but in existing circumstances the doctor was called in only in case of illness, and the present service of general practice was fundamentally a sickness service. On the other hand, there was the health visitor, who had her own special role, but was not trained in social work as the almoner was, and had not the time to undertake these skilled and delicate investigations. In psychiatry the social worker had already established her position, but as for general medicine Prof. Mackintosh was doubtful about the desirability, even if it were possible, of having almoners all over the country like health visitors and nurses. But he felt that the position of almoner might well be regarded as something like that of a health consultant. The future health centres or groups of practices might well employ almoners in a consultant capacity, so that the practitioners could refer to them cases presenting any special difficulty from the social point of view.

MEDICAL PRACTICE: IN THE MELTING-POT?

ADDRESS BY DR. CHARLES HILL

At a meeting at Ipswich on July 8 of the Suffolk Branch of the B.M.A., Dr. Charles Hill, Deputy Secretary of the Association, spoke on "Medical Practice: In the Melting-pot?"

There lay ahead of both the public and the medical profession, Dr. Hill said, a critical period, in which decisions of profound importance to the future of medical services would be taken. So far the Government had committed itself to Assumption B of the Beveridge report and so to a comprehensive health and rehabilitation service available to the whole of the community. It had stated its intention to administer that service through locally elected bodies. Within the framework of these two decisions informal discussions had been taking place between the Minister of Health and his officers, and representatives of the medical profession, voluntary hospitals, and local authorities. At the end of these informal and non-committal discussions the Minister would set out in a White Paper any tentative conclusions of the Government as a whole on the form that the proposed service should take. It was not yet clear to what extent this White Paper would be a statement of the issues or would include the Government's own conclusions. It was sincerely to be hoped that, on a matter of such profound importance to the public as a whole, the Government, by making this White Paper as non-committal as possible, would leave the crucial issues involved for free and frank discussion by the public before Parliamentary decision. It would be undesirable if consideration of these public issues began on the basis of commitments entered into by the Government beforehand. He hoped that the known political sagacity and wide experience of the Minister of Health himself would lead the Government to make a statement of the issues to be resolved rather than a premature, if tentative, expression of Cabinet opinion.

Fundamental Principles

The publication of the White Paper would be followed next winter by exhaustive and critical analysis of its contents by the profession, mainly through the Study Groups and Divisions, the Council and its Committees, and finally the Representative Body of the Association. Service men at home and over-seas would be given the fullest opportunity of expressing their views; but that, Dr. Hill pointed out, was Phase 2, and it would take time. Phase 1 should start now, and should be a clear and candid statement of the principles which should, in the public interest, underlie any future organization of medical services. The profession might well now divest their minds of details and search them for fundamental principles. The Council of the B.M.A., recognizing this position, would shortly be recommending to Divisions, and to the Representative Meeting to be held in September, a statement of fundamental principles. What, Dr. Hill asked, was really fundamental, in the public interest, to future development? He suggested certain points for immediate consideration.

The health of a people depended primarily upon the environmental conditions under which it lived: upon good housing, good food, adequate wages, and security against fear and want. No Government should be allowed to bemuse the public into believing that new hospitals, new centres, or new doctors were of equal importance to the public health. In a free democracy, for the State to ensure that a citizen had sufficient resources to obtain what he needed was generally to be preferred to actual provision by the State.

The medical profession could serve the community only in proportion to the medical knowledge available. The facilities and resources for research should be greatly increased. Medical education was the channel by which modern research could find expression in the daily work of doctors. The facilities for post-graduate medical education needed to be made more extensive and more accessible to practitioners.

Again, the medical profession had for years maintained that where economic barriers stood between the citizen and existing medical services they should be removed. That issue was not discovered by Sir William Beveridge, for it had been urged by the profession itself over many years. But whether that meant, or should in the public interest mean, that the State should

make provision for those who did not need its help was a different matter. In Lord Acton's dictum, "All power corrupts, and absolute power corrupts absolutely." In a democratic community the State should confine itself to what was necessary in the public interest and not indulge in extensions and controls for their own sake.

The Salaried Service Question

On the subject of the invasion of the personal freedom of both citizen and doctor Dr. Hill said that the function of the State might be taken as the organization and provision of medical services. But this did not involve the assumption of control over doctors rendering individual or personal health service. Provision where necessary should be the keynote of the State's activity. It was not in the public interest that the State should convert the medical profession into a salaried branch of central or local government. This did not mean that salaried medical service was inappropriate to many branches of medical work. The unwillingness of general practitioners for a translation to whole-time status did not mean or imply reflection on that efficient body of men and women in the Public Health Service. The salaried method was clearly appropriate to many branches of work, and to environmental work in particular. The Public Health Service had every reason to be proud of its contribution to human welfare in the last hundred years. But, Dr. Hill suggested, it did not follow that a method applicable to administrative, environmental, and some special clinical services was necessarily the method for personal health services.

Free choice of doctor should be preserved as a basic principle of future health services; and, what was even more important, no administrative structure should be approved which did not both permit and encourage such free choice. Free choice would fade in the whole-time salaried scheme. Whatever fields the State might invade in the public interest, it should leave the doctor–patient relationship untouched. The loyalty and obligation of an individual doctor rendering personal health service to an individual patient should be to that patient and none other. There were many who believed that the ideal doctor–patient relationship based on free choice could flourish only where it was reinforced by a system of remuneration of the doctor based on the number of persons he had at risk or upon the number of items of service he rendered.

Private Practice

There would be those members of the community who, whatever the form of the future medical service, would insist on making their own arrangements. It was not for the medical profession to analyse the motives behind this attitude. There were those who seemed to believe that something you paid for direct was more valuable than something you paid for through taxation or through insurance. This belief was not confined to the wealthier classes. Freedom might be untidy, but freedom there should be. Those who desired to make their own arrangements should have available to them a range of service and of doctors no less complete than that which would be available to patients under the official service. In short, those who stood outside should be free to make their own arrangements on a fee-paying basis with the doctors of their choice, whether they were doctors in the service or not. The application of this principle would no doubt lead to difficulty. It might well lead to the conclusion that what was necessary to satisfy public health needs was an extension of National Health Insurance to the dependants of existing insured persons and others of like economic status and no more. Others, with their eye on Assumption B, would suggest that the 10% in the upper income group might be permitted, if they so chose, to become voluntary contributors. In any case, there should be freedom for the public to obtain medical services directly, and the doctor should be able clearly to distinguish between those who wished to avail themselves of the State service and those who did not.

Lastly, administrative structure was fundamental. The profession believed that at the centre, whether in the form of a department or a corporate body, there should be an organization concerned solely with health and administration of all the health functions of central government. Associated with it on a statutory basis there should be a medical body to advise on medical issues. As at the centre, so at the periphery: a local administrative body working over a sufficiently large area and representative of local authorities, the medical profession, and voluntary hospitals. The time had come for a statement of fundamental issues, and the British Medical Association, fully conscious of its duties and responsibilities in representing the profession, was about to place those issues before it. Whatever differences might emerge during detailed discussion the profession should now stand together on fundamentals.

Reports of Societies

STATE NURSERIES

At a recent meeting of the London Association of the Medical Women's Federation, with Dr. ANNIS GILLIE, the president, in the chair, Dr. G. I. BRODIE (Ministry of Health) opened a discussion on State nurseries. The day nurseries, residential nurseries, and nursery classes now available, she said, provided places for 3.2% of the children under 5 in the country. Premises had been chosen with an eye to convenience and pleasantness where possible, but it had often been necessary to use prefabricated huts. Physical health had been the first consideration and mental health the second. The Ministry of Food had co-operated by giving the nurseries special priorities in food. Mrs. ENTHOVEN said that the National Society for Children's Nurseries offered training courses for girls wishing to become nursery nurses, and 40% of girls leaving school wanted to work with children. County schemes of training were now in operation, and the Royal College of Nursing and the Association of Sick Children's Hospital Nurses had collaborated with the society in arranging courses for State-registered nurses who were eligible to take posts as matrons of nurseries.

Dr. MARJORIE BACK pointed out that the day nursery did not solve the problem of the women doing full-time work; the homes of such workers lapsed into squalor. After the war medical women should insist that the married woman with young children was not a suitable person to undertake full-time work. The proper place for the baby under 2 was at home, if the home was a good one. Nurseries for those aged 2 to 5 might perhaps be developed in connexion with community centres with clubs for mothers, like the Peckham Health Centre, and not as part of our educational system. Nursery-minded staff were important for the 2–5 age group, who did not need a State-registered nurse in charge of them, though the health visitor should be in daily contact with the nursery. A child from an inefficient home usually improved on entering a nursery, but a child from a good home often received a check, became fretful, and lost a little weight. The incidence of infections was high in nurseries. Thus in 166 nursery months in nurseries under her care there had been 1,678 days of quarantine—i.e., all fresh admissions had had to be stopped during a third of the time the nurseries had been open. Illnesses had included nearly all the common infections of childhood except diphtheria, against which nearly all had been immunized.

In opening the general discussion Dr. KATHERINE HIRST agreed that the child under 2 was not a candidate for any institution, for both psychological and physical reasons. Dr. HELEN MACKAY said she had been conducting an investigation which kept her for long hours in day nurseries, and she had concluded that in spite of much good will and kindliness in the staffs there was apt to be a good deal of shouting from tired women and crying from fretful children, and that there was a high incidence of infection and a low incidence of happiness. Many children minded grievously the separation from their mothers; many were bored with the long hours in which they did nothing. These things might not be obvious in a short visit, but during the last three hours of the day most of the children were crying. They were separated from their mothers from 6.30 in the morning to 6.30 or 7 at night, and it was too long. The infection rate was higher than among children living at home. Of 120 children in two nurseries over a period of six months every child had been absent on the average 1 day in 4. Nearly all those under 2 had running noses and enlarged tonsillar glands. She doubted whether nurseries fulfilled the function for which they were intended

—to make woman-power available. They were expensively planned and equipped, breakages were high, and staffs had to be large. Yet the mothers whom they were supposed to release often had to stay away from work because the children were ill. She felt that the ill effects on children were not realized by the public, and that the nurseries were squandering rather than conserving woman-power. Other speakers agreed that the communal nursery was not the place for the child under 2; and some thought these young children were better off in their own homes, even when these were bad, for there the health visitor could advise and ameliorate.

Correspondence

Lung Complications after Operation

SIR,—The article in the *Journal* of June 19 (p. 754) on post-operative respiratory complications in Service cases by Bird, Kilner, and Martin draws attention to the high proportion of cases developing fever and cough with abnormal signs at the base of one or both lungs following operations for hernial repair—61 in 192 operations. In the same table 26 cases are shown following 98 appendicectomies. Reporting on civilian patients, Brock,[1] Sircar and Boston,[2] and others[3] have pointed out that while abdominal operations are responsible for the great majority of chest complications the risk is greater the closer the operation area is to the diaphragm. Experience in this hospital—26 cases following 170 inguinal herniorrhaphies—and in other Service hospitals has shown that this operation does carry a peculiar liability to chest complications.

In this recent report only 3 cases of consolidation were noted, whereas we have found some degree of lung collapse, always at the base, in most of those cases showing a rise of temperature up to 101°–102° F. This rise occurs typically in the afternoon of the day following operation. There is a corresponding rise in pulse rate but not a markedly increased respiratory rate. There is some dyspnoea, but cyanosis is exceptional. Clinically, an impaired percussion note is the one constant sign, and auscultation is not very helpful. Some displacement of the apex beat will usually be discovered, especially if the collapse is on the right side. *X*-ray films taken within a few hours of onset are not always diagnostic. There may be some shifting of the heart shadow or some elevation of the dome of the diaphragm, but loss of translucency is not often evident for 24 hours or more after onset. The temperature and pulse rate fall to normal within 3 or 4 days, although the atelectatic portion of the lung may not re-expand for many days afterwards.

Decreased movement of the diaphragm is an important factor in the development of post-operative chest complications, and a possible explanation of high incidence following inguinal herniorrhaphies lies in the operation itself. Most surgeons suture the conjoined tendon down to Poupart's ligament. This implies a certain amount of tension, more in the muscular individual, and rather more than drawing together the muscles after a muscle-splitting incision for appendicectomy. The oblique and transversalis muscles are antagonistic to the diaphragm owing to their common attachment to the lower ribs. To limit pain, therefore, diaphragmatic movement will be minimal. The diaphragm is responsible almost entirely for the ventilation of the lower lobes (Hoover), so that deficient ventilation as well as their dependent position render those portions of the lower lobe adjacent to the diaphragm more liable to atelectasis.

I do not think it possible to avoid all chest complications, but we have succeeded in lowering the incidence by routine prophylactic measures which require the co-operation of the nursing staff. Patients are discouraged from slumping into one position in the bed and are encouraged to move from side to side. Deep-breathing exercises are carried out every 2 hours for 24 hours before and 48 hours after operation. Morphine is not given post-operatively unless really necessary.

As shown in this recent report there is a tendency to a high incidence during the summer months, and this may be due to dehydration, the sputum becoming more inspissated and less easily evacuated. Thick viscid mucus is more likely to give rise to the blockage of a bronchus, which is generally considered to be the direct cause of post-operative atelectasis. For this reason we have discontinued pre-operative atropine or scopolamine during the summer months, and anaesthetize hernia patients with a medium dose of pentothal, 0.5 g., followed by cyclopropane.—I am, etc.,

T. F. MILES,
Surgeon Lieutenant-Commander, R.N.

Shortened Puerperium

SIR,—I have been incited by Dr. Hope Simpson's letter (July 3, p. 20), in which he stated that most of the previous letters had been written by those without actual experience of a shortened puerperium, to record the experiences of myself and my father, the late Dr. W. F. N. Haultain, on this subject, as it would seem probable that between us more cases have been treated by a shortened puerperium than by any other observers, at any rate in this country.

My father read a paper on "A Plea for a Rational Puerperium" before the Edinburgh Obstetrical Society in July, 1909, in which he strongly advocated early rising in normal cases, and gave statistics of 100 cases. From that date, until he died twelve years later, he carried out such treatment in all his normal cases, both in hospital and in private practice, and always asserted that in his opinion nothing but good had eventuated. I myself have practised this treatment both in hospital and private practice since 1922 and can fully confirm his views.

So far as I am concerned, however, I let my patients up on the 4th or 5th night and not on the 3rd day as my father used to do, because I like to see lactation well established before allowing them to rise, as there may be some deficiency of milk if the patient is allowed up before establishment has been effected. I would therefore suggest, as is fully stated in my *Handbook*, that early rising: (1) secures better drainage and involution; (2) helps to prevent backward displacement of the uterus; (3) promotes the circulation in the lower limbs and pelvis and prevents any tendency to embolus or phlegmasia; (4) increases muscular tone, thus preventing prolapse and helping the figure; and (5) mitigates constipation.

It is most unfortunate that hospital patients at the present time, owing to lack of accommodation, have to be discharged as early as the tenth day of the puerperium, and it is to be hoped that in the medical Utopia that is promised for the future such patients will be sent to convalescent homes for mothers and babies for at least ten days after discharge from hospital. As it is at present I feel it is better that the hospital patient should be discharged home (where, in many cases, she has to do her household duties again) after she has been up and about for five days and has regained a considerable amount of her strength—if indeed she has lost much after five days in bed—than that she should be allowed up on the 8th or 9th day and be sent home in a much less fit state to be able to cope with her household duties.—I am, etc.,

Edinburgh. W. F. THEODORE HAULTAIN.

Louse-borne Typhus Fever

SIR,—In Megaw's paper (Oct. 3, 1942, p. 401) on typhus fever the opening paragraph says that "zootic" typhus fevers are of minor importance as war diseases, and that these fevers cannot give rise to epidemics such as readily occur in louse-borne typhus. Attention is drawn to a small epidemic in Palestine in 1936, details of which were published in *Trans. roy. Soc. trop. Med. Hyg.* and extracted later in *Trop. Dis. Bull.* of 1937, **34**, No. 6, p. 476. This epidemic was proved to be a flea-borne one and lice were not found. In view of this Megaw's statement may require revision.

Contact between the soldiers and the collective farms of Palestine, in one of which the above epidemic occurred, is fairly close nowadays. Palestinian soldiers go to these farms on leave, while other soldiers visit them often. A small degree of danger may lurk here. In the second part of the same paper (Oct. 10, p. 433) under "The Other Fevers of the Typhus Group" Megaw discusses the possibility of the virus of flea-

[1] *Guy's Hosp. Rep.*, 1936.
[2] *British Medical Journal*, 1940, **?**, 82.
[3] "Respiratory Excursions of the Thorax," *Oxford System of Medicine*, 1937, Vol. 2, Part 1, p. 29.

borne typhus, after being transmitted in the first instance from rat to man by the rat flea, becoming at times capable of being transmitted from man to man by human lice, and adds that if this be occasionally possible "the resultant disease would automatically become louse-borne typhus and would have to be handled accordingly." This is a logical view, but in the epidemic mentioned above lice were absent, and, therefore, the possibility of a similar flea-borne epidemic occurring again cannot be overlooked.—I am, etc.,

P. N. BARDHAN,
Major, I.M.S.

No. 12 Indian Field Laboratory, M.E.F.

Symptomatology of Malaria

SIR,—With reference to the most interesting article by Capt. P. H. Birks (June 26, p. 784) someone has described malaria as a "protean" disease. This was very fully proved to those of us who had charge of malaria wards in the base hospitals of Salonika from 1916 onwards. So diverse were the symptoms produced by malignant tertian malaria that in the 43rd General Hospital a classification was drawn up, based on actual cases, showing how malaria may simulate many diseases or even surgical conditions. The classification was as follows:

Diagnosis made in the Field	*Type of Malaria*
1. CEREBRAL TYPES OF MALARIA	
1. Sunstroke, heat-stroke.	Comatose type of malaria.
2. Shell-shock.	Comatose type of malaria.
3. Mental deficiency.	Maniacal type.
4. Epilepsy.	Epileptiform type.
5. Cerebrospinal fever.	Cerebral type.
2. ABDOMINAL TYPES	
1. Dysentery.	Dysenteric type of malaria.
2. Cholera.	Choleraic type with collapse.
3. Intestinal obstruction, and acute appendix.	Symptoms produced by plugging of capillaries by malaria parasites.
3. PULMONARY TYPES	
Bronchitis, pneumonia.	Malarial pyrexia with pulmonary congestion.
4. CARDIAC TYPES	
D.A.H.	Cardiac distress due to haemolysis.
5. INFLUENZAL TYPES	
Influenza, rheumatism.	Pyrexia with joint pains.
6. ENTERIC TYPES	
Enteric fever, sandfly fever, trench fever, relapsing fever.	Typhoid-like temperature, and splenomegaly.
7. ICTERIC TYPES	
Jaundice.	Bilious remittent type of malaria. Coffee-ground vomit, icterus, remittent fever.
8. NEPHRITIC TYPES	
Nephritis	Nephritic type of malaria with albuminuria, haematuria, and pus cells in urine.
9. ANAEMIC TYPES	
Pernicious anaemia, debility, phthisis.	Enlarged spleen and profound anaemia due to destruction by parasites.

All the diagnoses on the left-hand side were taken from the actual field card and are those with which the patient was admitted to hospital. All the cases above were confirmed to be either malignant malaria or benign tertian. We found the above—perhaps rather rough—list very useful in putting newly arrived medical officers on their guard against the many disguises which malaria adopts.—I am, etc.,

D. M. M. FRASER.

Eastry, Kent.

Treatment of Blackwater Fever

SIR,—Having just read the interesting article on blackwater fever by Lieut.-Col. Felix Smith and Capt. R. Winston Evans (March 6, p. 279) I feel the following case may be of interest.

On Nov. 20, 1942, a Greek, aged about 35, was admitted to hospital from the bush with blackwater fever, which, he said, started four days previously. He had a large, very tender liver and his spleen was also enlarged. He was vomiting frequently and his condition was very poor. He was given an injection of 0.3 g. of atebrin immediately. The following day he still had fever and blackwater. Subtertian parasites were found in his blood and another injection of atebrin was given. On Nov. 22, when parasites were again found and the blackwater and fever were the same, it was decided to give him quinine 5 gr. by intramuscular injection: by evening the urine had cleared. On the morning of Nov. 23 blackwater returned and another injection of quinine was given. By the evening the urine was clear and it remained so thereafter. On Nov. 24 and 25 he had daily injections of quinine 5 gr. On Nov. 28 and 29 parasites were again found in his blood and he was given another injection of quinine. Thereafter quinine was administered in small increasing doses by the mouth.

The red cell count on Nov. 24 was 1,200,000; on Nov. 27, 1,180,000; on Dec. 2, 2,300,000; and on Dec. 9, 3,780,000. He was given fluids *ad lib.* in the form of barley-water and glucose with sodium bicarbonate. On Nov. 23 30 gr. of ferri et ammon. citr. was started four-hourly. He was discharged from hospital on Dec. 10 and returned to his work.

We have felt for some time that blackwater fever cases are overtreated. This is partly due to the long reports which often have to be made on these cases, so that one feels that everything possible should be done. I know this was so here up till 1930. These cases usually recover if given ample fluids and efficiently nursed, but malarial parasites must be eliminated. I have found that alkalis, if pushed, are inclined to start vomiting, and the patients then do well if given plain water. Anuria is the greatest danger, and I consider this the only indication for intravenous therapy, except for very severe cases of anaemia. The patients in the three fatal cases I have seen have died after several days of anuria. During the last ten years I have treated twenty-seven cases of varying severity, and have been fortunate enough to have no fatalities.—I am, etc.,

R. N. HALL.

City Hospital, Kano, Nigeria.

Clinical Diagnosis of Breast Tumours

SIR,—Valuable information is obtained by placing the patient in the knee-elbow position and inspecting the breasts from the front and sides. Displacement of the nipple or indrawing of the breast in the area of the tumour often becomes apparent in this posture. I have been advised to describe this sign by several surgeons to whom it has been demonstrated.—I am, etc.,

A. BASIL ROOKE, F.R.C.S.

Bournemouth.

Cancer of the Lung: A Clinical Sign

SIR,—Cancer of the lung seems to be becoming more frequent. I have been greatly helped in the diagnosis by hearing the heart sounds conducted to abnormal parts of the chest by the tumour. The heart sounds seem to be conveyed when the tumour is in contact with the heart, especially in growths starting in the mediastinum, and they are not heard when the growth begins in the upper lobe or in the outer part of the lower lobe.

In one case, referred to me as a chronic bronchopneumonia owing to a persistent cough with occasional rises of temperature to 100° F., the lower two-thirds of the left back were dull and breath sounds very weak. In the upper part of this area between the fourth and eighth ribs there was a patch about the size of the palm of a hand, where heart sounds were quite loud, but breath sounds and vocal resonance were absent. This led me to diagnose cancer of the lung, which proved correct.

In another patient weighing 16 st., with slight haemoptysis, the hearing of heart sounds in the right third space for two inches from the sternum, where there were dullness, much diminished breath sounds, and no vocal resonance, enabled me to make the right diagnosis of malignant disease.

In large tumours on the right side heart sounds can be loudly heard even as far as the anterior axillary line, breath sounds and vocal resonance being absent.—I am, etc.,

WALTER BROADBENT, M.D.Cantab., F.R.C.P.,
Consulting Physician to the Royal Sussex County Hospital, Brighton.

Nasal Intubation

SIR,—My article (June 5, p. 693) in no way suggested a condemnation of nasal intubation in anaesthesia; it only advocated the observance of certain precautions in procedure and the realization of some contraindications, the neglect of which might bring an otherwise excellent method into disrepute because of its ill-advised application.

I agree with Dr. Clendon that complications are uncommon and only infrequently of a severe character, but many of the milder variety never come to the notice of the anaesthetist and only confront the rhinologist later on. When there is any antagonism to nasal intubation it usually comes from the rhinologist, not from any motives of jealousy, as is suggested, but because the rhinologist, from his knowledge and training in intranasal conditions, is the one best qualified to speak of the implications involved. Moreover, he is the one who usually has to deal with any sequelae; consequently his view should receive its just valuation.

Dr. Clendon's assertion that the experienced anaesthetist is able to diagnose "the nature of any obstruction" by passing a tube blindly into the nose and exploring with it is indeed an astounding one. Moreover, his analogy that "the type of

urethral obstruction" can be diagnosed by the passage of a sound or catheter is on insecure foundations; surely inspection through a urethroscope or cystoscope is necessary in most cases before any tentative diagnosis made by such means can be confirmed. Similarly, inspection of the nose by a head-light can alone reveal purulent secretions, soft polypi, or the very large casts of the nasal passage associated with atrophic rhinitis, all of which may be detached by gentle pressure, and propelled onwards towards the larynx as the tube passes down. —I am, etc.,

London, W.1. A. R. DINGLEY.

Oedema of Extremities at Sea

SIR,—Dr. H. E. Thorn (June 5, p. 708) remarks on the occurrence of oedema of the feet and ankles in fit men during a voyage. I believe this is not an uncommon condition when on passage from temperate climates to the Tropics, and under these conditions I have observed eight or nine cases in a destroyer. I believe the cause of the condition is the heat of the sun and of the decks damaging the capillaries of the feet and ankles, which, because of their anatomical position, bear the greatest weight of blood. In my cases it was impossible to relieve the men of their duties, and lotio plumbi only was used, the condition clearing up in about a week. In two cases calcium lactate was given with no benefit. The rational treatment for men in a troopship would seem to be to relieve the damaged capillaries by keeping the feet up.—I am, etc.,

T. E. BARWELL,
Surgeon Lieutenant, R.N.V.R.

"Better Sight without Glasses"

SIR,—Bates's theory cannot be entirely dismissed. Orthodox orthoptic training has shown that relaxation exercises can be most efficacious when the muscles of the eyes need relaxation. Cases of low hypermetropia, where symptoms of asthenopia are present, are usually corrected with plus lenses, while deeper investigation would in all probability reveal convergence insufficiency of an exhaustion type. Orthoptic training has shown us that what is more effective than plus lenses, in many of these cases, is treatment by means of relaxation exercises, resulting in the elimination of the cause of the insufficiency, whereby the patient can overcome the small amount of hypermetropia without the aid of glasses. Apparent and *pseudo*-myopia are treated by means of orthoptic training in exactly the same manner, the spasm of accommodation being unlocked by relaxation. Bates's methods have by coincidence cured these types of cases, but his physiological basis is entirely incorrect, and to generalize, as he does, is positively harmful and gives false hope to many.

I have seen a few of Bates's "cures" and had the opportunity of examining these cases. They were invariably cases of pseudo-myopia, and each one had, in the first place, unfortunately obtained normal visual acuity by wearing very weak minus lenses. Bates's relaxation exercises (corresponding to orthoptic training exercises on the synoptiscope type of instrument) had unlocked the spasm of accommodational-convergence and the patient had "thrown away his glasses." —I am, etc.,

London, W.1. MARGARET DOBSON.

Pediculus pubis in the Eyelashes

SIR,—In recent months I have seen at the Prince of Wales's General Hospital two cases of *Pediculus pubis* lodging in the eyelashes: this particular location, though recognized, must be exceedingly rare.

The first case was that of a young man; he observed something moving in his eyelashes, tried to catch it and failed; he said that it disappeared under his upper lid. He went to his doctor, told him about it, and the doctor, seeing nothing, told him he was imagining things. Fired by this taunt, he watched, waited, and caught it, and brought it in triumph to the hospital, where the pathologist, Mr. Benians, readily identified the parasite. I referred the patient to Dr. Klaber, who reported that he was a hairy man and the infestation widespread; of this the patient seemed to be unaware. The second case was that of a girl of twenty. The history is similar. She also had observed it and informed her doctor, who was equally unbelieving. She then organized a search of her eyelashes, and with the help of a friend caught one—and lost it. This patient was brought to me by Dr. Klaber, who had found a heavy infestation in the left axilla and a lighter one in the right.

It seems probable that the parasites were carried to the eyelashes on a finger. In view of the tendency of this parasite to avoid the light, it seems unlikely that it would multiply in the eyelashes, and even its survival is not likely to be of long duration.—I am, etc.,

London, W.1. NORMAN FLEMING.

Bran in the Diet

SIR,—There are, I am convinced, some individuals whose bowels act more satisfactorily and who feel better if to their daily food they add bran, the exact quantity differing in different persons and varying from time to time, partly in relation to the kind of food in the diet. By this simple means such individuals are generally able to avoid all other treatment for constipation. The bran seems to act by increasing the bulk of the unabsorbed contents of the large intestine rather than by its particles irritating the mucosa. Specially prepared bran (such as "All-bran") is certainly very convenient to use, but owing, I suppose, to its having been classified among "luxury" cereal instead of among "medicinal" preparations it is not now sold in London and the southern zone of England, though it is still obtainable in Liverpool and the North. Those who require it in London can, therefore, only obtain it in some way from the northern zone—for instance, from Liverpool.

They can, of course, use ordinary bran instead. Unfortunately the latter cannot be bought from bakers or ordinary provision shops, but only from millers and with the help of a special permit. By eating bran-containing bread the requisite amount of bran may doubtless be consumed, if one does not mind habitually and wastefully overloading the digestive system with superfluous—and therefore probably harmful—food which has to be swallowed in order to obtain the requisite amount of bran. The stringy cellulose of cabbage does not do equally well in many cases. I hope this at first sight insignificant question may attract the notice of doctors who are consulted by the Ministry of Food.—I am, etc.,

London, W.1. F. PARKES WEBER.

Water for Rabbits and Guinea-pigs

SIR,—Dr. T. Hare (July 3, p. 24) says: "If Dr. E. L. Kennaway had been familiar with the literature of rabbit and guinea-pig management, a good selection of which was bequeathed by the late Henry Gray to the library of the Royal College of Veterinary Surgeons, I think he might have modified some of his statements." Perhaps Dr. Hare would point out the statements in my article which require modification. I confess at once that I was ignorant of the writings of the rabbit fanciers of the last century, and of the bequest of this literature by Dr. Henry Gray, and can only express regret that I did not refer to these authorities. But whatever may be the knowledge on this subject which is laid up in libraries, in the world outside there is widespread ignorance on this question. From the humanitarian standpoint this matter is urgent; the exact attribution of credit to earlier generations of rabbit keepers is in comparison unimportant.

We must be grateful to Dr. Hare for bringing to light the old rule that rabbits on dry food "require about one-third of a pint of milk or water daily." One-third of a pint is 190 c.cm. This provides a rather wider margin, for the largest animals, than the 160–170 c.cm. which we found to be drunk by rabbits of medium size. Dr. Hare tells us also that "the old fanciers recommended about a tablespoonful of water or milk daily" for guinea-pigs on a dry diet. This is certainly a cautious rule; some of our guinea-pigs here drink much larger amounts. Hale-White,[1] in defining a tablespoonful, says, "usually it is very nearly 15 c.cm.," but some spoons of this category hold over 21 c.cm. An adult guinea-pig of 600–700 g. is about 1/4 the weight of a rabbit and might be expected to require 1/4 as much water. On the "one-third of a pint" rule for rabbits a guinea-pig should receive $\frac{190}{4} = 48$ c.cm. The older literature to which Dr. Hare refers would no doubt give the grounds upon which the "tablespoonful" rule is based. —I am, etc.,

Chester Beatty Research Institute, S.W.3. E. L. KENNAWAY.

[1] *Materia Medica, Pharmacy, Pharmacology and Therapeutics.* 12th Ed., 1911.

A Non-electric Suction Apparatus

SIR,—Dr. N. F. Saher and Mr. R. Salt are to be congratulated on their article (June 26, p. 790) where they describe improvements in the application of the injector. Our improvements in this application of the injector (*Lancet*, June 12, 1943, p. 738) have gone even further. These are: (1) we have eliminated the "foot-hand complex" by replacing the foot control with a simple valve on the actual sucking inlet; (2) the time lag to develop high negative pressures is abolished by having available *constant* negative pressure without the injector working continuously. This is achieved by an automatic device regulating the positive pressure side of the injector. This device is a simple diaphragm, controlled by an inlet from the negative-pressure side, and it can be adjusted to operate through any range of negative pressure; (3) there is no limit to the capacity of the receiving bottle or bottles with our apparatus, as negative pressure is maintained all the while and does not have to develop each time the suction tips or catheters are used.—I am, etc.,

Twickenham. NORMAN R. JAMES.

Specialists and State Service

SIR,—There are only a few points in Dr. S. Cochrane Shanks's letter (June 26, p. 802) that call for comment.

My original questionary was sent to the membership of the British Institute of Radiology, and only the replies from the medical members were considered for the published figures. The survey was, therefore, representative of radiologists throughout the country and not confined to a small group of "consultants." The Faculty of Radiologists is really a branch of the British Institute of Radiology and has a membership of a limited character, but practically all members of the Faculty are also members. My figures were compiled from a representative circularization of the country as recently as three weeks before publication of my letter (June 5), but is it not the case that the questionary sent out by the Faculty was circularized as long as two years ago? I make this observation subject to correction, but if my information is correct, surely the dangers of advising to-day on the return of a two-year-old plebiscite must be obvious, and I think this is the real answer and not that suggested by Dr. Shanks. May I suggest the Faculty organize a new questionary and vote and think again after this referendum. This observation also answers the second paragraph of Dr. Shanks's letter, and may further raise the question as to whether or not the B.M.A. has got a really correct impression to-day of the desires of radiologists from a questionary two years old?

My information about the activities of the Faculty is quite up to date irrespective of the fact I did resign my membership of that body in 1940, on the grounds of disagreement with its inadequate policy towards members and the national effort.

It is interesting to learn the Faculty do not favour full-time State medicine; but, after reading the pamphlets issued by this body, it is still difficult to discover where it rejects a full-time State salaried service. It would be of great assistance to hear briefly and concisely the details of the actual form of organization for radiologists the Faculty does favour.—I am, etc.,

London, W.1. NORMAN P. HENDERSON.

Specialist Courses for Service M.O.s

SIR,—Mr. Bevin's plan for training persons discharged from the Services having brought this problem into public consciousness one may be permitted to consider for a space the position of the younger members of our profession who at the outbreak of war had been qualified three years or thereabouts and were holding posts of the registrar type with the object of obtaining a higher qualification. Many of these young doctors joined up at, or soon after, the outbreak of war, and so lost the opportunity of working for the qualifications they desired. I think any medical man will agree that work done under Service conditions is not likely to produce success in examinations of a clinical nature. The atmosphere is difficult for the student, there are disturbances and interruptions beyond his control, and the nature of Service duties is not of great value for clinical work except for a fortunate few, and even the Service hospital cannot, by its nature, provide the necessary facilities for the clinical study and work required, however hard the student may apply himself to his reading in off-duty or in slack times.

Can our teaching institutions give a thought to the salvaging of this group, now into the early 30's, many in the natural course of events married, but still hoping to be able to take up the threads of their interrupted careers when eventually demobilized or otherwise discharged, but not wishing for general practice or public health work? I feel certain that this question will interest many members of the 28–33 age group, and a suitable scheme would result in many being saved for the clinical specialties and future hospital staffs who might otherwise be forced to take up general practice—when, doubtless, they would do a good job of work, but not so good as they could do—or go into public health, a branch of the profession which they would probably dislike and for which they show little aptitude.

No person can do good work if he dislikes it and feels he could do something else much better—a fact recognized in industry by the efforts of the psychiatrists, but which seems in danger of being forgotten as applied to the various branches of our own profession. No one can deny that the surgeon, the physician, the medical administrator, and the hygienist have different types of minds, and that vocation must play a large part in selection. If the system of automatic direction of people into posts should persist in civil life, the resulting work will be mediocre even though it may be competent.

Vague and nebulous promises of "if you do your bit now you won't be forgotten" cannot help the budding surgeon who has not handled a scalpel for four years to remove his next appendix, nor can they—quite rightly, when dealing in human life as we do—impress an examiner or a hospital board faced with a choice for an R.S.O. or R.M.O. between one whose last surgery or clinical medicine was four or five years ago and one who has been doing such work all along by some fortunate chance. Others of your correspondents may have some views on this matter.—I am, etc.,

L. W. ALDRIDGE.

Doctors and the Future

SIR,—I would offer the following points as a brief answer to Dr. C. A. H. Franklyn's question in his letter (June 26, p. 801) asking what is considered wrong now: (1) The gravitation of doctors towards the better paying areas often away from the more densely populated districts. (2) The buying and selling of the goodwill of practices. Financial rather than medical ability determines the size of a practice. The cost of treatment is inflated by the interest paid to the moneylenders. (3) Many practices are too large for the number of doctors engaged in them to give due attention to all their patients. (4) Practices are frequently ill equipped in buildings, furniture, and professional appliances. The doctor does not find that the fees he can earn justify the outlay necessary for proper equipment. (5) A feeling prevalent among the poorer sections of the public that it is not getting the best possible medical service. (6) Lack of sufficient hospital accommodation, shown by long waiting lists. (7) The artificial cleavage and, at times, antagonism between curative and preventive medicine.—I am, etc.,

Bristol. N. S. B. VINTER.

The Edinburgh Surgical Fellowship

SIR,—The Royal College of Surgeons of England is celebrating the centenary of the Fellowship on July 21, and I think it may interest the Fellows of the sister College of Edinburgh to know something of their Fellowship. The foundation of the College goes back to 1505, but it was not until 1778 that it was incorporated by Charter granted by George III as the Royal College of Surgeons of the City of Edinburgh, when its members were then called Fellows. In 1851 Queen Victoria granted another Charter and the name and title were changed to the "Royal College of Surgeons of Edinburgh," the word "City" being omitted.

The Fellowship of the College was only obtainable by examination, the production of a thesis, and the entrance to the Widows' Fund of the College. These restrictions, especially the expense incurred—some £300—formed a barrier to many

desirous of this honour. They remained in force until 1884, when the Council decreed that the thesis and entrance to the Widows' Fund should be eliminated, but an examination of a much stricter character should be exacted of all ordinary candidates, who, after passing it, should be balloted for by the Fellows, and this arrangement is being followed at the present day.

It is somewhat curious to learn that although there were no Ordinary Fellows until 1778 we find that an Honorary Fellowship was conferred on Sir Andrew Ramsay on Oct. 17, 1671, and from thence, of course, many up to the present time.—I am, etc.,

Lancaster. C. W. DEAN, F.R.C.S.ED.

Obituary

A veteran member of the profession, Dr. EDWARD THOMAS PRITCHARD, died in retirement at Hove on June 10. He studied medicine at the University and the Royal College of Surgeons of Edinburgh, and graduated M.B., C.M. in 1885, proceeding M.D. in 1908. Part of his life was spent in China, where he held for 7½ years the post of medical superintendent of the Peking Hospital and lecturer in the medical department of the Imperial College, Peking. Dr. Pritchard joined the British Medical Association in 1890 and remained in active membership up to the end of 1936, by which time his sight had failed and he was unable to read.

Dr. F. E. ROWAN-ROBINSON died on June 11, aged 65. He qualified at Edinburgh University as M.B., Ch.B. in 1900, and joined the R.A.M.C. shortly afterwards. He served in the South African War, Aden Hinterland Campaign, and in the war of 1914-18. He was invalided in 1921. He returned to medical work during the present war, being a member of a London recruiting board and continuing this work till progressive malignant disease compelled resignation. By his kindness and courtesy Dr. Rowan-Robinson won the affection of a large circle of friends. He leaves a widow but no family.

Dr. MALCOLM MCLARTY, who died on June 12 after a short illness, had a distinguished career at Edinburgh University, where in 1895 he graduated M.B., C.M., and in 1898 B.Sc. in Public Health. Thenceforward he carried on an extensive practice in the city. He was one of the senior Fellows of the Royal College of Physicians of Edinburgh, his election dating from 1911. He had been a member of the B.M.A. for 46 years. To his patients and friends Dr. McLarty was known as a man of great charm and gentleness and integrity of character, with wide general interests and a cultivated mind.

The Services

Temp. Surg. Lieut. T. M. C. Roberts, R.N.V.R., has been mentioned in dispatches for endurance and good services to the wounded after his ship, H.M.S. *Lightning*, had been sunk.

Major (Temp. Lieut.-Col.) J. S. Richardson. R.A.M.C., has been appointed a Member of the Royal Victorian Order (Fourth Class).

The *London Gazette* announces the appointment to M.B.E. (Civil Division) of Mrs. Margaret Henderson Thomson, M.B., Ch.B., Malaya Medical Service. The announcement reads as follows:

Dr. Thomson was wounded by a bomb splinter just before leaving Singapore. After the Japanese had dive-bombed the evacuation ships, she was picked up by a lifeboat and rendered invaluable aid among the wounded. Noticing that the boat was badly undermanned, she took an oar herself and, despite her own wound, pulled hard for four hours and did much to encourage and keep up the morale of the boat's company. For three days, while marooned on Kebat island, with no food at all and very little water, she continued to attend to wounded women and children. Later, on Senajang island, she took charge of over fifty wounded cases, and tended them day and night, in spite of a serious shortage of medical supplies and with the crudest of surgical appliances. She also assisted greatly in the safe evacuation of the most urgent cases to Sinkep island hospital. But for her resolution and disregard of self many of these people would have died, and it was due to such sacrifice on her part that her wound turned septic and she followed her own patients to hospital. Later she displayed admirable courage throughout the difficult journey across Sumatra.

CASUALTIES IN THE MEDICAL SERVICES

Died on Active Service.—Major J. N. Strauss, R.A.M.C.

Previously Reported Missing, now officially Reported Prisoner of War.—Lieut.-Col. (acting Col.) K. P. Mackenzie, R.A.M.C.

Prisoner of War.—Capt. G. S. Riddell, R.A.M.C.

Previously Reported Missing, now Reported Prisoner of War.—Capt. A. Farquhar, R.A.M.C.

Killed.—Temp. Lieut.-Col. A. Macdonald, R.A.M.C.

Universities and Colleges

UNIVERSITY OF OXFORD

In a Congregation held on July 1 the following medical degrees were conferred:

B.M., B.CH.—J. A. Ritchie, *R. E. Lee.

* *In absentia.*

UNIVERSITY OF BIRMINGHAM

At a Congregation on July 3 the following degrees were conferred:

M.D.—Prof. A. C. Frazer and Prof. J. M. Webster (*ex-officio*), [1] J. L. Collis.

M.B., CH.B.—[2 3] E. A. Barker, [2 4] V. S. Brookes, [2 3 4] Kathleen M. Lawrence, [2 3 5] R. W. Tudour, [2 3] J. N. Wilson, L. E. Arundell, Ursula M. Baines, Helen J. Bayliss, E. R. Bickerstaff, R. L. Bishton, P. Brown, Kathleen M. Chipperfield, G. I. Clarke, M. A. Cooke, F. Cullis, P. Dawson-Edwards, C. B. Eccles-Smith, Jean Edmonds, C. G. Edwards, H. J. H. Evans, K. W. Forber, J. Hallam, A. H. Hamed, J. G. Hoult, A. Jarrett, L. Joseph, Beatrix Kaelin, A. R. Kenderdine, Eileen M. MacShane, Julia M. Neal, Margaret Newton, K. I. Price, Joan Stanton, L. J. Topham, J. Tregillus, L. W. Waters, T. A. White, [3] Yvonne J. Williams, Barbara D. Wright.

The following scholarships, medals, and prizes have been awarded:

Queen's Scholarship (third year), K. D. Roberts; (fourth year), J. N. Ormrod; (fifth year), Theresa Lazar; (final year), V. S. Brookes. *Ingleby Scholarships*, V. S. Brookes, Kathleen M. Lawrence. *Foxwell Memorial Medal*, J. N. Wilson. *Gamgee Memorial Medal*, R. W. Tudor. *Priestley Smith Prize in Ophthalmology*, V. S. Brookes. *Butterworth Prize*, V. S. Brookes. *Leith-Newman Prizes in Pathology* (fourth year): Medical, J. L. Stafford; Dental, D. H. Goose. *Thompson Prize in Anatomy* (third year), K. D. Roberts. *Russell Memorial Prize*, J. G. Hoult, R. A. F. Jack. *Humphreys Memorial Prize*, E. A. Marsland. *Windle Prize in Anatomy*, G. A. Readett.

[1] First-class honours. [2] Second-class honours. [3] Distinction in medicine. [4] Distinction in midwifery. [5] Distinction in surgery.

UNIVERSITY OF MANCHESTER

The following candidates have been approved at the examinations indicated:

M.D.—*By thesis:* [1] T. E. Barlow, [1] B. Finkleman, [1] I. Harvey Flack, [1] W. H. Shepley. *By examination:* G. Bridge.

FINAL M.B., CH.B.—[2 4] R. I. Mackay, [2 3] S. B. Rampling, [2 4] A. F. Robinson, [2] R. Tepper, J. S. Battersby, D. C. A. Bevis, D. H. Blakey, [3] H. M. Blacquière, D. L. Boardman, H. L. Brisk, C. P. Brown, O. O. Cowpe, Frances G. Danson, C. J. Dewhurst, P. R. Duncan, B. I. Einhorn, Nora F. M. Falk (Mrs. Wilkinson), F. Fletcher, J. W. Fletcher, [3] Margaret Garnett, J. Grayson, G. Hargreaves, J. C. Howarth, Mary W. P. Huddart, F. Jackson, Marjorie T. Lee, Mary P. McGlade, E. B. N. Marchant, Doreen Mitchell, J. G. Oddy, S. Portnoy, Ruth J. Praysnitz (*née* Whitley), P. T. Quinlan, P. H. Renton, R. H. Sewell, J. H. Shelswell, K. H. Smith, H. Sosnowick, J. L. Taylor, Lois E. N. Turner, P. Vulfsons, [3] E. G. Wade, Margaret Wardle, T. A. Yates. Part I (*Forensic Medicine and Hygiene and Preventive Medicine*): H. W. Ashworth, W. C. Astley, F. Batley, D. G. Berry, R. B. Broughton, R. W. Burslem, J. H. Diggle, Constance M. Duddle, Doreen M. M. Dutton, G. V. Feldman, I. L. Gregory, Margaret Hedley, J. D. Heppleston, J. Hewet, R. Hierons, Marion E. Jepson, F. Latham, Margaret M. Lawton, Marion B. T. McIntosh, H. McIntyre, H. B. Marsden, T. M. Martin, Joan A. Mettam, B. Nicholson, T. A. Nowell, Nancy B. Penney, L. Rose, P. W. E. Sheldon, J. A. Shrigley, L. Shuck, H. Tabbush, A. E. Thomas, Elizabeth Travers, G. S. Tupman, W. V. Wadsworth, G. H. Watson, B. Wilkins, P. O. Yates, J. Sharp.

[1] With commendation. [2] Awarded second-class honours. [3] Distinction in medicine. [4] Distinction in surgery.

UNIVERSITY OF ST. ANDREWS

The following medical degrees were conferred on June 25:

M.D.—G. H. Robertson (with honours for thesis), D. M. McGillivray.

M.B., CH.B.—[1] J. G. Lawson, [2] A. L. Webster, [2] J. W. F. Scrimgeour, [2] G. W. Mills, [2] J. D. Stephen, [2] W. L. MacD. Perry, [2] J. W. Eadie, [2] W. M. Walker, [2] A. Herschell, [2] Constance F. Drysdale, [2] Violet Auld, J. M. Aitken, Sheena M. Allardice, G. M. Ashurst, Ann B. Austin, Ann E. Bruce, J. M. Brunton, Mary E. Bryson, W. E. A. Buchanan, W. Christie, Sheila G. F. Conacher, Frances R. T. Broadbent (or Cruickshank), W. Davidson, D. A. E. Dewar, J. G. Fisher, J. L. Fyfe, A. C. Hay, Frances C. Kerr, J. A. R. Lawson, Margaret P. Laxton, Joan I. McCracken, I. C. R. Macdonald, R. A. McInroy, B. A. Marshall, Doris C. Morgan, R. M. Munro, Sheila M. Ore, Evelyn J. Rounthwaite, Daphne M. Scott (or Rushforth), S. N. P. Stobie, R. Summers, I. McC. Troup.

[1] With distinction. [2] With commendation.

The following prizes were presented:

Price Memorial Prize (Surgery): L. Frain-Bell and A. G. Watson. *Capt. W. A. Low Prize and Medal in Medicine for the most distinguished graduate:* J. G. Lawson. *MacEwan Prize (Surgery):* A. L. Webster. *Robert Davies Royds Prize (Medicine and Pathology):* J. W. F. Scrimgeour.

NATIONAL UNIVERSITY OF IRELAND

At the summer examinations held at University College, Cork, the following candidates for higher medical degrees were approved:

M.D.—E. J. Cantillon, T. Creedon, Nora A. Hayes, D. J. O'Callaghan.
M.CH.—M. D. Hickey, R. F. O'Driscoll.
M.A.O.—J. B. Kearney.

QUEEN'S UNIVERSITY, BELFAST

The following candidates have been approved at the examination indicated:

M.B., B.CH., B.A.O.—Una B. Byrne, J. Crilly, Ethel A. Fisher, H. N. Glancy, B. Gorfunkle, W. J. B. Higson, E. D. Lindsay, C. W. McKee, R. A. McKeown, Ona McMillan, R. Millar, W. J. Moffett, Hilda A. Reade, J. C. S. Ritchie, Zdenek Steiner, Kathleen H. Stewart.

UNIVERSITY OF DUBLIN

SCHOOL OF PHYSIC, TRINITY COLLEGE

The following medical degrees were conferred on June 30:

M.D.—D. T. Bardon, M. C. Brough, A. F. J. Delany, M. H. Fridjhon, C. P. Clancy-Gore, S. Sevitt.

M.B., B.Ch., B.A.O.—M. T. S. Conradie, C. S. Cummins, Lorna R. J. d'Abreu, A. P. Dignan, A. J. H. Donnell, Margaret E. Eccles, D. F. S. Flood, E. F. B. Forster, J. M. Garvin, P. G. Harris, R. T. John, P. J. Keane, Mona M. F. Kelly, D. K. Kiersey, T. C. Kirkpatrick, G. M. C. McBrien, T. J. Macdougald, C. R. F. McDowell, J. A. O. Mulcahy, Elizabeth A. Robinson, M. S. C. Rooney, A. O. Sasegbon, E. B. Stephens, T. N. Strong, A. H. E. Thomas, D. D. Towle, T. J. C. Warriner, C. B. Wilson, J. S. Wood.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

New Regulations for the Fellowship

The Council of the College has revised the regulations for the Fellowship, and the Primary Examination beginning on Nov. 29 next will be the last to be conducted under the present regulations.

New regulations approved by the Council will become effective after the end of 1943. These regulations embody the following changes: (1) the Primary Examination cannot be taken by undergraduates, but will be open only to Members of the College, or to graduates in medicine and surgery of the Universities and Medical Colleges recognized by the Council for the purpose, who are able to comply with the conditions; (2) the subject of the Primary Examination will be (*a*) anatomy (including normal histology), and (*b*) applied physiology and the principles of pathology. A synopsis indicating the general scope and spirit of the examination in applied physiology and the principles of pathology is published in the new Regulations.

With regard to the Final Examination, no candidate will be admissible without producing evidence of having been engaged in the acquirement of professional knowledge for not less than two years after obtaining the Membership of the College or some other recognized qualification (see 1 above).

The dates of the examination have been rearranged so that it will be possible for candidates who pass the Primary to proceed immediately to the Final Examination, if they are eligible. During 1944 the examinations will begin on the following dates: Primary, April 24 and Oct. 23; Final, May 4 and Nov. 2.

Copies of the new Regulations and full particulars may be obtained post free from the Director of Examinations, Examination Hall, Queen Square, London, W.C.1.

Medical Notes in Parliament

Medical Examination of Home Guard

On June 22 Mr. E. P. SMITH asked the Secretary of State for War if his attention had been called to the coroner's verdict at the inquest on Mr. Arthur Chudney of West Wickham, Kent, to the effect that death was occasioned by heart failure due to and following strain while engaged on military Home Guard duties, and whether, in the light of this fact, he would reconsider his recent refusal to institute medical examination of the Home Guard. Mr. ARTHUR HENDERSON said he understood that before the exercise it was explained to the men that those should fall out who felt they were not equal to it or found in the course of it that the training was too hard. Much as he deplored the death of this Home Guard, he did not consider that the facts of the case showed that the arrangements outlined in the answer given by the Secretary of State for War on June 1 should be modified. Mr. SMITH asked, now that the Home Guard were qualified for military death and disability pensions, what logical alternative there was to giving them proper and periodical medical examinations, together with grading for duties. Mr. HENDERSON said it would be extremely difficult to carry this out, having regard to the number of the Home Guard and the number of doctors available.

The Medical Register

On June 29 Sir E. GRAHAM-LITTLE asked the cost to the Exchequer of the production of the *Medical Register* and the average annual sale of the volume; and whether Sir John Anderson would take steps to improve the preparation of the *Medical Register*, for the printing and publication of which the General Medical Council was responsible. Sir Ernest asserted that its record of addresses and medical qualifications of doctors was less accurate than the *Medical Directory*, which was produced by private enterprise. Sir JOHN ANDERSON replied that the production of the *Medical Register* involved no charge on public funds, its cost being defrayed from the resources of the General Medical Council. The average annual sale in the three years immediately before the war was 785 copies, and in the years 1940-2 475 copies. The *Register* was not primarily intended to serve the purposes of a directory, but, as was stated in the preamble to the Medical Act, 1858, which provided for the keeping of the *Register*, to enable persons requiring medical aid to distinguish qualified from unqualified practitioners. Owing to pressure on their reduced staff and to the difficulty under war conditions of ascertaining whether the registered addresses of many practitioners in the *Register* remained correct, the G.M.C. had found it impracticable to maintain its normal procedure of periodically verifying addresses by written inquiry. He had no doubt, however, that this procedure would be resumed as soon as normal conditions were restored. Section 30 of the Medical Act, 1858, enabled but did not oblige practitioners to have inserted in the *Register* certain qualifications additional to those by virtue of which they were first registered. Legislation would be required to make the *Register* a complete record of additional qualifications of such standing as to deserve recognition in it.

Medical Services and Staffs of Government Departments

Replying to Sir Percy Hurd on June 29, the Financial Secretary to the Treasury stated that the following Departments provided medical services for their staffs, the numbers of medical and associated personnel and the estimated cost being as stated:

Department	Personnel	Cost
		£
Admiralty	99	43,000
Ministry of Supply	765	210,000
Customs and Excise	2	1,265
Inland Revenue	4	750
Ordnance Survey	1	250
Post Office	25	12,275

In addition, about £65,000 was expended by the Post Office in respect of similar services to some 2,600 local medical advisers.

The following Departments had medical services for the purpose of fulfilling their administrative functions, the numbers of medical and associated personnel and the estimated cost being as stated:

Department	Personnel	Cost
		£
Broadmoor Criminal Lunatic Asylum	25	10,100
Prison Service, England and Wales	141	56,820
Supreme Court of Judicature	2	3,300
Prison Service, Scotland	14	3,340
Board of Control	427	104,000
Ministry of Pensions	1,276	305,885
Board of Education	8	8,140
Scottish Education Department	1	1,100
Ministry of War Transport	2	1,700
Ministry of Health	162	138,586
Welsh Board of Health	9	10,370
Department of Health for Scotland	39	34,266
Ministry of Labour and National Service	14	14,032
India Office	3	1,750
Colonial Office	2	2,350
Ministry of Fuel and Power	10	9,000

It was not possible to say how these services might be affected by the Beveridge proposals.

Diploma in Public Health

Sir FRANCIS FREMANTLE asked on June 30 if steps were being taken to reconsider the courses and examination for the Diploma in Public Health in accordance with modern requirements, for which the present regulations were insufficient and out of date. Sir JOHN ANDERSON answered that the present Resolutions and Rules of the General Medical Council for Diplomas in Public Health came into force in October, 1938. In 1938-9 a visitation of examination for such diplomas was made by the Council. The general report of the Public Health Committee of the Council on the visitation, which was published in May, 1940, criticized the examinations in detail. It did not appear to support the suggestion that the Resolutions and Rules were insufficient and out of date. In any event war conditions would make any general revision of the curriculum for such diplomas inopportune.

Tuberculous Infection in Nurses

On July 1 Mr. BROWN told Mr. Messer that there were no figures showing the number and percentage of nurses employed in general hospitals who contracted pulmonary tuberculosis. In the report of the M.R.C. Committee on Tuberculosis in Wartime, published in Oct. last, it had been stated that evidence from other countries and expert opinion in our own suggested that the risk of contracting tuberculosis from nursing tuberculosis patients in sanatoria was no greater than that involved in general hospital nursing. The Registrar-General's decennial supplement of 1931 regarding occupational mortality observed that mortality statistics provided no evidence of special occupational risk of tuberculous infection in the nursing profession.

Soldier's Death in Detention Barracks

On July 6 Sir ARCHIBALD SOUTHBY asked the Secretary of State for War what action was being taken about the military doctors who failed to ascertain the true medical condition of the late Rifleman Clayton, whose death occurred recently in a military detention barracks. Sir JAMES GRIGG, replying to this and several other questions, said that the Government had decided that an independent inquiry should be held into conditions at Navy and Army detention barracks generally, and he hoped shortly to announce who would conduct the inquiry. It would, of course, be for the inquiry itself to determine the manner in which it would conduct its proceedings. In the meantime the Military Court of Inquiry on the special case of Fort Darland was sitting, and in accordance with the usual practice this inquiry would not be open to the public.

Mr. RHYS DAVIES asked if inquiry would be made into the responsibility of the doctor who certified Rifleman Clayton as fit for duty. Sir JAMES GRIGG replied that he had had the report of an inquiry into that particular aspect, but he had not had time to study it and was not in a position to say anything about it. Sir ARCHIBALD SOUTHBY asked if the Secretary for War would see that the terms of reference of the Court of Inquiry laid particular stress on inquiry into the action of the doctor who failed in his duty and did not see that the man was ill. Sir JAMES GRIGG said he would not give any terms of reference to the court which would seek to prejudge any question in advance. The terms of reference would certainly cover medical arrangements.

Capt. CUNNINGHAM-REID asked the names of the doctors who passed the late Rifleman Clayton, who was suffering from tuberculosis, as fit for the Army. Mr. GEORGE TOMLINSON, who replied, said that the whole of the circumstances of this case were at present the subject of inquiry by the Secretary of State for War, and the Minister of Labour was not prepared to give partial information in advance of the results of that inquiry with regard to particular aspects of the case. Dr. SUMMERSKILL asked if Mr. Tomlinson was aware that many doctors who had read this case had said of themselves: "There, but for the grace of God, go I"?

Commissioned Rank for Masseuses

On July 6 Sir FRANCIS FREMANTLE asked the Secretary of State for War why the same prospect of advance to commissioned rank given to nurses and to physiotherapists in oversea Forces was refused to women specially trained as masseuses and to other physiotherapists; and whether he would receive a deputation from the Chartered Society on the subject. Mr. ARTHUR HENDERSON replied that masseuses were employed by the War Department as civilians under conditions of employment accepted by the Chartered Society of Massage and Medical Gymnastics. This arrangement was working satisfactorily, and he was not satisfied that the adoption of Sir Francis Fremantle's suggestion would improve the present service of masseuses. He would gladly see a deputation on the subject. Sir FRANCIS FREMANTLE asked if it was not true that the Chartered Society entirely disagreed with that statement, and were very anxious to have commissioned rank, which was not the same thing as being employed as civilians from outside the Army. Mr. HENDERSON said that the deputation would have an opportunity of conveying those views.

Appeal Tribunals: Bill Held Over

When the House of Commons went into Committee on the Pensions Appeal Tribunals Bill, on July 1, Mr. QUINTIN HOGG moved the first of a series of amendments designed among other things to remove from the Bill the provisions limiting the appeal concerning grants. After vigorous debate Mr. EDEN intervened as Leader of the House to move to report progress and suspend consideration of the Bill. He said it was natural that the House should prefer to look at the matter again when it knew what proposals the Government was going to bring forward affecting the Royal Warrant on pensions. He was willing that the Bill should stand over till the Government's general proposals were made available to the House.

Sir WALTER WOMERSLEY said that anything contained in an amended Royal Warrant would be binding on the tribunals.

Progress was then reported.

Medical Board Rejections

On July 6 Mr. HEWLETT asked the Minister of Labour if he would ensure that when doctors discovered on medical examination any latent disease of which a called-up man might be unaware he was in all cases told the exact reason for his rejection so that he might take private advice. Mr. TOMLINSON replied that it was formerly the practice to do this, but the results were found to be unsatisfactory for various reasons. It was now the practice in such cases for the Medical Board to advise the man to consult his own doctor.

Propaganda, Bad and Good.—On June 24 VISCOUNT HINCHINGBROOKE asked whether Mr. Brown knew that the National Anti-Vaccination League circulated literature to expectant and nursing mothers advocating a course of action with regard to vaccination and diphtheria immunization contrary to the declared policy of his Department. Mr. BROWN said he knew of this and was of opinion that it was best countered by effective and positive action. The Ministry and local authorities were therefore continuing propaganda to advise parents to have their children protected by methods supported by the best medical opinion.

Certification Panel at Burnley.—Answering Mr. Burke on June 10, Mr. BEVIN said that on their own initiative medical practitioners of Burnley had formed a panel, meeting once a week at Burnley employment exchange, before which, for the convenience of all concerned, workers appeared who were seeking release from employment for health reasons. This arrangement did not require his approval, except that the use of the employment exchange building had been allowed owing to the absence of other suitable premises. His Department did not compel workers to attend before this panel nor did it refuse to consider medical certificates from other doctors.

Home Guard M.O.s in Northern Ireland.—On July 6 Mr. MESSER asked the Secretary of State for War why medical officers in the Home Guard in Northern Ireland were granted only honorary rank while those in England were granted commissions. Mr. ARTHUR HENDERSON replied that for administrative convenience the Ulster Home Guard formed part of the Ulster Special Constabulary, and no question of granting commissions in the Army could arise until such time as that force was mustered, when it became an integral part of the armed Forces of the Crown.

Tuberculosis in Scotland.—The number of cases of tuberculosis notified in Scotland during 1938, 1941, and 1942 were:

	Pulmonary	*Non-pulmonary*	*Total*
1938	4,793	2,772	7,565
1941	5,739	2,555	8,294
1942	6,207	2,824	9,031

Mr. Johnston states that, comparing 1938 and 1942, all age groups show increases in varying degrees, the most marked increase being in the 15-25 age group.

Medical News

A course of six lectures on industrial health has been arranged by the Socialist Medical Association, and will be held at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C., on Wednesdays, from July 21 to Aug. 25, at 6 p.m. The lecturers are Drs. T. O. Garland, Donald Stewart, E. L. Middleton, Hugh Faulkner, R. S. F. Schilling, and Joan McMichael.

A conference on hospital meals has been arranged by the Food Education Society for Tuesday, July 20, at 3 p.m., at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C. The Minister of Health will take the chair and among the speakers will be Lord Horder and Sir Alfred Webb-Johnson, P.R.C.S. A film illustrating the dietetic treatment of rheumatism will be shown.

As a follow-up of the United Nations' Conference on Food and Agriculture, held at Hot Springs, U.S.A., the London International Assembly is holding a conference on post-war world food problems at the Livingstone Hall (opposite St. James's Park Tube Station) on Monday, July 19, at 2.30 p.m., with Viscount Cecil in the chair.

It is proposed to promote a Memorial Fund to the memory of the late Brigadier W. James Eastwood, who died at the age of 40 while holding the position of consulting orthopaedic surgeon in the Middle East. Those wishing to contribute to the fund should send donations to Mr. T. P. McMurray, Medical Institution, Liverpool, 3.

The Medical Section of VOKS, the U.S.S.R. Society for Cultural Relations with Other Countries, has issued a few numbers of a "Medical Chronicle." A limited number of stencilled copies of the fourth issue of this periodical (December, 1942) is available at 6d. a copy, post free, from the Anglo-Soviet Medical Council, c/o the Royal Society of Medicine, 1, Wimpole Street, London, W.1. This issue comprises nine typed foolscap pages, and there are brief reviews of such subjects as the "napthalan" treatment of wounds, experience of naval physicians, utilization of the raw-material resources of the U.S.S.R., and reactions to air-raid alarms.

Dr. Angus A. Cameron is officially reported interned in Singapore. Official information has been received that Drs. C. C. B. Gilmour, O.B.E., D. M. McSwan, M.C., Hugh Smith, E. A. Struthers, and William Young (Kuala Lumpur) are interned in Changi Camp, Singapore.

In 21 years the Hospital Saving Association has raised £10,000,000 for the hospitals. Besides this routine work by which it helps contributors to avoid hospital bills, the Association has raised a special fund of £10,000 which will be used to provide scholarships for hospital nurses.

The Board of Education has issued to local education authorities Administrative Memorandum No. 468 (July 1, 1943) on the subject of school meals, laying down the procedure for the supply of kitchens, sculleries, and canteens by the Ministry of Works, together with a set of standard plans and a set of schedules of equipment.

Surgeon General Thomas Parran reports that since the outbreak of war the U.S. Public Health Service has given *x*-ray examinations for tuberculosis to nearly 250,000 people, and he foresees the possibility that with 20 portable *x*-ray units now in full operation 2,000,000 chest examinations would be completed during 1943. The U.S. Public Health Service has carefully studied the increase in tuberculosis mortality in Great Britain as a result of wartime conditions. In the United States slightly more than one in every 100 persons examined have significant tuberculosis of the lungs. Of these, between 55 and 60% are in the early stages most amenable to treatment, usually without sanatorium care. From 35 to 45% of the cases discovered by the Public Health Service are moderately advanced, and only 3 to 4% far advanced. The *x*-ray units employ portable 35-mm. photofluorographic equipment. Each is staffed by a medical officer, a technician, and a clerk, and has complete equipment for exposing and processing from 300 to 500 *x*-ray films per eight-hour day. Special attention is being given to shipyards, ordnance plants, air depots, and other essential establishments where no facilities for chest *x*-ray examinations are available.

EPIDEMIOLOGICAL NOTES

Discussion of Table

In *England and Wales* notifications of measles and of dysentery fell by 698 and 57 respectively, but those of diphtheria and whooping-cough rose by 42 and 412.

The county totals of scarlet fever changed but little, and 6 fewer cases were notified for the whole country than in the preceding week. In the South and in London there was, however, a slight increase on the previous week; conversely, for diphtheria the increase was contributed by the North. The rise in the notifications of whooping-cough was general, the largest of the local increases being 91 in Lancashire and 33 in Staffordshire. Measles pursued an up-and-down course—down by 200 in Kent, by 97 in Essex, and by 79 in Suffolk; and (outstandingly) up by 89 in Buckinghamshire.

No fresh outbreak of dysentery was reported, and the number of cases declined by one-third during the week. In Lincolnshire, Scunthorpe M.B., notifications rose from 6 to 10; in Gloucestershire, Bristol C.B., from 8 to 14; and in London from 10 to 16. Dysentery has now persisted in Bristol for thirteen weeks, and a total of 121 cases has been recorded.

In *Scotland* notifications of dysentery rose from 56 to 108, and those of measles fell by 110. The rise in dysentery was general, the chief centres of infection being Edinburgh 30, Stirling county 17, Glasgow 15, Aberdeen 11. Fewer cases of measles are still being recorded: two-thirds of the notifications were from Glasgow 189, and Paisley 41.

In *Eire* the higher figure for whooping-cough resulted from an outbreak in Westmeath, Coole R.D., where there were 19 cases. Of the 11 cases of typhoid 7 were reported from Co. Cavan, Cavan R.D.

Statistics of Infancy

The statistics for the 126 large towns and for London separately for the first 26 weeks of this year indicate that the birth rate has risen and the infant mortality and stillbirth rates have decreased from those of the first half of 1942. The figures are:

	First 26 Weeks of Year			
	London		126 Large Towns	
	1942	1943	1942	1943
No. of live births	15,949	20,365	150,858	169,924
No. of stillbirths	595	568	5,997	5,932
Deaths age 0–1	1,083	1,221	9,449	10,110
Infant mortality	68	60	63	59
Deaths from diarrhoea under 2 years	130	219	933	1,253

The deaths from diarrhoea have risen by 34%, whereas the birth rate increased by only 13%.

The Week Ending July 3

The notifications of infectious diseases in England and Wales during the week included: scarlet fever 1,984, whooping-cough 2,249, diphtheria 608, measles 4,165, acute pneumonia 530, cerebrospinal fever 49, dysentery 120, paratyphoid fever 10, typhoid fever 8.

No. 25

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended June 26

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland.

Figures of Births and Deaths, and of Deaths recorded under each infectious disease are for: (a) The 126 great towns in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1943					1942 (Corresponding Week)				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
Cerebrospinal fever	64	4	28	2	4	108	7	29	4	7
Deaths		3	1				—	3		
Diphtheria	582	30	148	79	33	719	36	162	55	19
Deaths	14	2	2	1	—	12	—	3	5	1
Dysentery	107	16	108		—	151	9	41	—	—
Deaths				—	—		—		—	—
Encephalitis lethargica, acute	3	1	—		—	6	—	2	1	—
Deaths		1					—	—		
Erysipelas			38	9	4			37	9	3
Deaths		—					—	—		
Infective enteritis or diarrhoea under 2 years				33						
Deaths	46	13	10	10	8	31	6	12	6	2
Measles	5,774	331	322	18	16	6,375	745	607	49	264
Deaths	2	—	1	—	—	7	1	3	3	—
Ophthalmia neonatorum	85	5	16		—	94	94	14	—	—
Deaths										
Paratyphoid fever	11	1	1		—	8	—	3	3	
Deaths	—	—	—		—	1	—	—		—
Pneumonia, influenzal*	553	24	2	1	3	655	35	3	10	2
Deaths (from influenza)	8	—	—	2	—	6	—	2	—	—
Pneumonia, primary			184	16				216	18	
Deaths		15		7	8		22		8	15
Polio-encephalitis, acute	—	—				1	—			
Deaths	—	—					—			
Poliomyelitis, acute	5	1	3		—	12	—	1	—	—
Deaths		—					—			
Puerperal fever		1	13		1	—	4	14	4	2
Deaths		—					—			
Puerperal pyrexia†	157	17	17	2	1	184	8	17		6
Deaths		1								
Relapsing fever	—	—			—	—	—			—
Deaths										
Scarlet fever	1,680	156	244	46	60	1,320	64	211	48	23
Deaths	—	—	—	—	—	—	—	—	—	—
Small-pox	—	—	—		—	2	—			—
Deaths				—	—	—	—	2	—	—
Typhoid fever	11	—	6	11	1	6	—	6	7	1
Deaths	—	—	—	—	—	—	—	—	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—
Deaths				—	—				—	—
Whooping-cough	2,330	119	240	50	47	1,394	132	34	48	29
Deaths	13	3	6	1	1	8	—	1	2	1
Deaths (0–1 year)	290	44	72	43	24	288	38	58	25	23
Infant mortality rate (per 1,000 live births)										
Deaths (excluding still-births)	3,967	587	559	206	132	1,886	566	552	187	117
Annual death rate (per 1,000 persons living)			12·6	13·5	‡			12·4	12·5	‡
Live births	7,030	857	992	394	292	5,976	656	952	464	299
Annual rate per 1,000 persons living			20·2	25·9	‡			19·7	31·0	‡
Stillbirths	236	24	30			239	17	33		
Rate per 1,000 total births (including stillborn)			29					34		

* Includes primary form for England and Wales, London (administrative county), and Northern Ireland.

† Includes puerperal fever for England and Wales and Eire.

‡ Owing to evacuation schemes and other movements of population, birth and death rates for Northern Ireland are no longer available.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, LONDON, W.C.1.

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ANY QUESTIONS?

B Vitamins and Yeast

Q.—*Current teaching seems to be that single vitamin deficiencies rarely occur. Where, for example, symptoms indicate a deficiency of one of the B vitamins, treatment should apparently consist in administration of the whole B complex and not the one vitamin lack of which appears to give rise to the symptoms. Are all the B vitamins present in yeast? What is their concentration in, say, a 5-grain yeast tablet supplied by the chemist? How many grains daily should be prescribed in a suspected case of B hypovitaminosis? Is any harm likely to arise through the continued use of yeast tablets? Sollmann, for example, in his 1942 "Manual of Pharmacology," refers to the degeneration of rat testes produced by a yeast-containing diet.*

A.—Some at any rate of the disappointment with vitamin therapy is due to inadequate dosage. It is probably true that the individual members of the vitamin B complex work better when they are in association with each other, but at the same time it is difficult to give a therapeutic dose of vitamin B_1 without using a concentrate. That conclusion seems inescapable if we approach the problem on quantitative lines. All the B vitamins are present in dried yeast. Bacharach (*Food*, 1940, **9**, 110) gives the following values per gramme of dried yeast: vitamin B_1 (aneurin hydrochloride) 15 to 120 μg., nicotinic acid 550 to 650 μg., riboflavin 20 to 40 μg. The figure for pyridoxine is given elsewhere as 65 μg. A 5-grain yeast tablet would contain a third of these values. Bacharach estimates the amount of dried yeast necessary to supply the normal daily requirement of vitamin B_1 at 1/4 to 7 oz. a day. It is therefore not really practicable to give even a maintenance dose of yeast in tablet form, and it is better given as brewers' yeast, bakers' yeast, or food yeast (*Torula utilis*). Amounts up to 1½ oz., equivalent to 120 5-grain tablets, can be given in this way, though anything above a teaspoonful t.d.s., best given in beef-tea or meat extract, is an effort. Dried yeast is a concentrated source of nitrogen and phosphorus as well as of vitamins. Disturbances of nutrition have occurred in growing pigs when as little as 4% of the daily ration consisted of yeast, though larger amounts than this can be tolerated if extra calcium is supplied. On these and other grounds one would suggest that the safe upper limit of dosage of dried yeast in adult man was approximately 3 oz. a day. Therapeutic doses of vitamins are much larger than the maintenance requirements. Brown (*Proc. Mayo Clin.*, 1940, **15**, 215) sets the daily therapeutic dose of vitamin B_1 at 20 to 100 mg. orally, which is equivalent to 5 to 25 oz. of dried yeast a day! It would seem, therefore, that it would be neither practicable nor safe to treat hypovitaminosis B_1 by dried yeast alone. It would be wiser to try to get the best of both worlds by using a reasonable dose of dried yeast, not more than 1/2 oz. a day, plus a large dose of the pure aneurin hydrochloride.

Congenital Heart Disease

Q.—*A healthy mother, now aged 29, has had three children; the first, born four years ago, was apparently a healthy female child, breast-fed, but at 6 months old was found dead in her pram, having vomited her last feed. She had been left for only a few minutes. The second child, born three years ago, was a male and is in robust health. Two years ago the mother had a tubal pregnancy, which was removed at operation. The third child, a female, was born 8 months ago and has congenital heart disease; she gets periodic attacks of vomiting after feeds, and at such times collapses and appears about to die. The question arises—Did the first female child suffer from undetected congenital heart disease, and, if so, is it probable that future children will be liable to have the same abnormality?*

A.—The data are not sufficient for any other than a tentative answer to be given. It is unlikely that the first child had undetected congenital heart disease, because it had had no symptoms before its sudden death. It is unusual for more than one child in a fraternity to have a congenital heart lesion. It is probable that patent ductus arteriosus is inherited and possible that other forms of congenital heart disease are hereditary, but little work has been done on the subject. The question is complicated by the fact that malformations of the heart are associated with arachnodactyly (incompletely dominant), transposition of the viscera (recessive), mongolism, and other defects.

Two Cases of Epilepsy

Q.—*Can any suggestions be given for two patients approaching the menopause who have suffered for years from attacks of petit mal, associated with voidance of urine, causing naturally much annoyance and inconvenience? None of the usual remedies—phenobarbitone, "prominal," "epanutin," and "rutonal"—has relieved this distressing symptom.*

A.—It is unusual to find epileptics in middle life who have attacks consisting only of a momentary disturbance with incontinence of urine and who have not responded to any of the phenobarbital or hydantoin group of drugs. The occurrence in two patients raises the possibility that the condition is not simply epileptic, since petit mal is usually fairly well controlled by adequate doses of these drugs. If there is no doubt at all as to the diagnosis, phenobarbital can be pushed to 2 or 3 grains a day, or can be combined with epanutin or a bromide mixture; but it must be remembered that the hydantoins do not control minor attacks so well as major ones. A simple bromide mixture with belladonna may well be more efficacious, and many chronic epileptics are well controlled by the following mixture given 3 times daily: sod. brom. gr. 7, sod. biborat. gr. 10, liq. arsen. ♏ 3, and tinct. belladonnae ♏ 5. As these two patients have already reached the stage of using the more expensive brands of phenobarbital it is likely that the more usual measures have been tried. It would consequently be advisable to make sure that no local defect of bladder control is present, either in the bladder itself, the urethra, or in an occult spina bifida. It is really very unlikely that if the incontinence is entirely due to epilepsy it will not respond to increasing doses of the anticonvulsants.

Pruritus in Pregnancy

Q.—*I have a patient, 8 months pregnant, quite well and normal in every respect except for an intense generalized pruritus. The weight of the trouble falls on the hands and feet, which swell up and become warm and covered with an urticarial blush. So far I have tried various antipruritic lotions, calcium cum vitamin D injections i.m., and cool baths with sodium bicarbonate, without much success.*

A.—Large doses of vitamin B_1 are most likely to be of help in this case, unless, of course, there has been some irritating factor apart from the pregnancy to account for the condition—e.g., if this patient has been doing a good deal of gardening it would be advisable to go carefully into the possibility of sensitivity to something handled there. If this source of urticarial reaction can be excluded, then the case would appear to be one of pruritus of pregnancy. I would suggest giving a basal sedative such as luminal gr. 1 once or twice a day, and an injection of vitamin B_1 2 mg. daily. If in spite of this the condition does not improve and is a source of sufficient distress to the patient it would be wise to induce labour. The condition should rapidly clear in the puerperium, probably within the first few days.

Sore Tongue

Q.—*A single lady of 60 has suffered for six months from soreness of the tip of the tongue. There is very slight surface thickening there, but nothing else abnormal. The condition is getting no worse. She has applied lanoline without effect. She wears complete dentures; they are not irritant. What can be done?*

A.—Soreness of the tongue in the absence of any local signs is sometimes related to a general condition—e.g., a severe anaemia. But in many instances no local or general cause can be found. These latter cases can be very troublesome and tend to occur particularly in older patients. The character of the pain is such as to suggest an ascending neuritis in the nerve supply—possibly arising from some long-forgotten and transient superficial inflammation. The slight surface thickening in the case under consideration may indicate this pathology. Some of the cases probably have a deficiency of vitamin B_1, so that it would be as well to provide all the B fractions, if necessary by injection. Nor should it be overlooked that the condition may be a neurosis underlying which is a cancerophobia. This not uncommon type is unfortunately often the outcome of anti-cancer propaganda campaigns. These cases should be reassured by examination at intervals, but in all cases local applications should be avoided as much as possible.

Ulcer on Lip

Q.—*A man aged 60 has an ulcer on the left lateral portion of his lower lip, of two years' duration. The ulcer is oval in shape, with the long axis parallel to the lip—3/4 in. long by 1/4 in. broad, and situated entirely on the mucous membrane about 1/4 in. from the mucocutaneous junction. The ulcer is shallow, only the mucous membrane being deficient. The edges of the ulcer are regular; there is no induration at either the base or the edges. The base is of a*

slightly deeper red than the lips and is covered by very numerous minute white specks, which on being squeezed exude a cheesy material. There is no pain or tenderness. He is a pipe-smoker and usually held the pipe in this position of his lips, but now has changed it over to the right side of his mouth. There is no glandular enlargement. Local treatment has been of no avail.

A.—This ulcer must be due either to an injury (as from teeth or the pipe's nipping the lip) or to an unusual type of carcinoma. The description seems to exclude syphilis and tuberculosis. The only method of establishing the diagnosis, and the most satisfactory method of treatment, would be to excise the ulcer and have it examined histologically.

Recurrent Sore Throat

Q.—*I have come across many cases in the last few years of persistent or recurrent sore throat. In one type the sore throat occurs on waking in the morning ; it may be very acutely sore and then is gone again in half to one hour. This temporary soreness also may recur during the day or sometimes during the night. The other type of sore throat is persistent, and without treatment may last for weeks or even months. It usually responds to a mixture of liq. ferri perchlor. and glycerin, but this does not prevent recurrence. Physical examination shows injection of fauces and uvula, which remain much the same during and between attacks. I would be grateful for any further information on this subject, especially as regards the prevention of recurrence in these cases.*

A.—The probable explanation is mouth-breathing at night, due partly to nasal obstruction and partly to sleeping on the back so that the mouth falls open. Another factor may be a chronic infection of the tonsils, which may be quite small ; but if the pharynx is examined with two small spatulas, one of which is used to depress the tongue and the other to draw aside the anterior faucial pillar, a gross infection is often revealed. Applications of argyrol or Mandl's iodine paint are useful, short of tonsillectomy. Another frequent aggravating factor is the excessive smoking of cigarettes. Diathermy is to be avoided, as it produces scar formation which encysts the tonsillar discharge and makes tonsillectomy afterwards more difficult. Lactucarium lozenges are useful also.

An Asymmetrical Head

Q.—*A child is born with one side of the head and the ear slightly larger than the other. There is no evidence of motor, sensory, or trophic disturbance. What is the probable cause and what is the prognosis?*

A.—The short description of this case conforms with that of congenital asymmetry, which to a minor degree is very common indeed, since most people show a slight difference in the size and shape of the two sides of the face and head. In its minor forms it is not noticed and is just accepted as part of the individual's personality, and indeed the man who has a perfectly symmetrical face is sometimes said to "lack personality." This being so, the condition does not matter much, and as age increases tends to be less and less noticeable. Facial hemiatrophy has quite a different prognosis. This condition usually begins in later life, but has been described as early as the second year. Here the tissues in the distribution of the trigeminal nerve undergo a progressive and unsightly atrophy. It usually begins in the cheek, frequently affects the ear, and undergoes spontaneous arrest after a few years. Its cause is quite unknown, and except for cosmetic surgery there is no treatment. It is most probable that this is not the condition described in the question, which is much more likely to be simple congenital asymmetry.

Treatment of Glandular Fever

Q.—*I should be grateful for advice on the treatment of glandular fever. All the textbooks I have seen simply say "symptomatic treatment." Two of my patients—brothers aged 11 and 7—have had these enlarged glands and a morning or evening temperature of about 99° F. for nearly 8 weeks. The glands occur in chains on both sides of the neck and in the axillae and groins. The boys are not ill. I have two other cases, adults, with exactly the same signs and symptoms. Sulphanilamide, potassium iodide, and salicylates seem to have no effect. What are the latest views as to the pathology?*

A.—Glandular fever has been successfully transmitted to human volunteers and to monkeys, and the evidence points to its being a virus infection. It would therefore hardly be expected to respond to the sulphonamides, and they are rarely successful in practice. Specific convalescent serum is of some value in the early stages, but it is doubtful whether it is justifiable to use it in the absence of serious complications or in the later stages. Scarlet-fever convalescent serum has also been recommended, but no reports confirming its value have been seen. There is a tendency for lassitude and low pyrexia to linger for some weeks or months after the attack. If other lesions can be excluded, it is probably wisest to encourage the patient to neglect the pyrexia, or to treat it by amidopyrine gr. 5–15 p.r.n. or cryogenine gr. 5–15 p.r.n. If either of these drugs is used a close eye should be kept on the leucocyte coun Ultra-violet irradiation would be appropriate for the persiste glandular enlargement.

Haemoglobinometer for General Practice

Q.—*What is the best haemoglobinometer for general practice Haldane's method requires attachment for a Bunsen, which few practi tioners possess. Is Sahli's method a good one and much used?*

A.—At the moment the best haemoglobinometer for general prac tice is the Haldane, because it is the only one which is standardize by the National Physical Laboratory. The difficulty of having Bunsen attachment, can be got over by having a cylinder of CO ga with a fine attachment which is obtainable from the British Oxyge Company, East Lane, North Wembley, Middlesex. The Sahli metho is the second best method available and is very widely used. It wil shortly also be available in a standard form which will be checke and certified by the National Physical Laboratory.

Refurbishing a Thermometer

Q.—*How can I refill the engraved graduations on a clinical thermometer when they have been rubbed off by frequent washing and sterilizing?*

A.—The best method of filling the graduations on clinical and other thermometers is by means of silicon ester, used with a suitable pigment such as ilmenite black. To use this method satisfactorily, however, involves great care, as it is essential that all traces of grease and of the old filling should be removed first. Moreover, the silicon ester does not keep. The method, therefore, is really only available to a manufacturer. The most suitable method otherwise is to rub in artist's quality black oil colour. The surplus should be removed by wiping lightly with a dry rag along the length of the thermometer (i.e., across the graduations). The pigment should be left for two days to dry before the thermometer is used. This method does not give a result quite as permanent as that of silicon ester properly applied, but, on the other hand, it is superior to many fillings which are used commercially. A useful method to give temporary legibility to a thermometer is to rub the side of the point of a pencil up and down the stem across the graduations, wiping the surplus lead off with the thumb or a piece of paper.

INCOME TAX

Wife's Part-time Earnings

T. W. asks whether the wife's special earned income allowance (of £80) applies to surtax as well as to income tax.

*** No; it does not apply to surtax.

Payment of Interest

R. N. asks what allowance he can obtain for interest being paid quarterly.

*** If the interest is paid to a bank the amounts can be treated as professional expenses. No deduction is due for other interest, as the payer is entitled to deduct income tax at the standard rate (10s. in the £) as he pays the interest; in such a case he pays the net amount to the lender and the balance is ultimately paid to the Revenue as part of the tax charged on him.

LETTERS, NOTES, ETC.

Recurring Erythema of Face

Dr. JOHN T. INGRAM (Leeds) writes: I question whether your assessment of this problem under "Any Questions" in the *Journal* of July 3 (p. 30) is correct. The picture, with its time incidence, site of origin and character of spread, desquamation and serous exudate, does not suggest a recurrent erysipelas but a sensitization dermatitis from contact with cosmetics or actinic light or plants or some similar agent. The solution demands a little detective work and avoidance of or protection from the provocative cause.

"Morton's Metatarsalgia"

Mr. J. S. BATCHELOR (London, S.W.1) writes: The reply to the question concerning the treatment of Morton's metatarsalgia (June 26, p. 808) makes no reference to the fact that certain and speedy cure is provided only by operative treatment. So-called Morton's metatarsalgia is a condition in which acute lancinating pain, usually brought on by walking, occurs in the toes, commonly in the adjacent surfaces of the 3rd and 4th, of a foot which presents no special orthopaedic abnormalities. The number of therapeutic measures recommended in the answer is an indication of the characteristic ineffectiveness of such treatment. In practically every case Morton's metatarsalgia is caused by a neuroma of one of the digital plantar nerves of the foot, commonly the 4th. A simple operation for the removal of the neuroma gives immediate relief. A full description of this condition, with an account of the operative treatment, is given by Betts (*Med. J. Austral.*, April 13, 1940, p. 514). I have personally operated on a small number of cases with extremely satisfying results.